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designing inclusion

Theory &Practice

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Jessica Noël-Smith is a chartered Architect, advocate, and academic specialising in accessible and age inclusive design practice. Over the past 20 years Jessica has gained a variety of interdisciplinary experience including working in the disability sector, architectural practice, social housing, and dementia design.

Jessica's research contributes to a new interdisciplinary cluster focussing on accessible environments at the University of Stirling, Scotland. Her PhD thesis examines theethical, moral and sociological impacts of contemporary accessible design practices in the UK, revealed by the lived experiences of disabled people and the gap between technical compliance and human rights.

In 2024, Jessica founded Beyond Access - a consultancy supporting designers and place-makers to go *beyond mere compliance* when creating accessible and life-long inclusive environments. Jessica is also a member of the Royal Incorporation of Architects in Scotland (RIAS), the Access Association, the Scottish Ecological Design

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www.beyondaccess.co.uk

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EDITORIAL

Designing Inclusion: Perspectives from Theory and Practice

By Jessica Noël-Smith

I am delighted and honoured to be invited by Dr. Sunil Bhatia to guest edit the September 2025 edition to be published during the Design for All Institute of India's celebratory 20th year, alongside an esteemed line-up of superb female-led guest editors.

When I look back at the past twenty years of my own career, beginning with my fledgling years as an architectural studies student, I'd like to say I have seen great progress in the field of designing built environmentswhich are considerate to*all*, mainstreaming universal design principals and inclusivity; but the reality is that I just don't see the progress and momentum Ihad personallyhoped for. This is not to say that progress has stalled entirely, in fact there is plethora of fantastic work being done both in research spheres and across practice and industry, some of which you will read about in the following papers of this edition.

Looking at the bigger picture, design standards such as building regulations for accessibility, (such as the UK'sApproved Document

M) remain largely unchanged since their inception, design education does not routinely featuretheory on the social model of disability, and attitudes in practice commonly seem to default to minimum compliance rather than maximising or investing in best practice access and inclusive design practice.

I see this tussle almost daily in my work in practice as an accessibility consultant and architect, when the reality of developing and delivering inclusivedesign is often seen as an add-on to the main design, or when accessibility is described as a 'balance' as if disabled access is somehow at odds with, oris a compromise to the primary design objective. And it's this particular issue, when architectural spatial planning seems to struggle with integrating inclusivity as an intrinsic part of the design process itself, that recently brought me back to academia to embarkon my PhD research into the way in architects and designers apply accessible design in practice, investigated through the lens of lived experience of those who are disabled by built environments.

As such, straddling both worlds of academic research and practice is where I have chosen to position the theme of this volume, with rich insights of both experienced industry experts and researchers tackling issues at the forefront of how best to carry out design for all, which is simultaneously inclusive for all andresponding to the contemporary challenges of placemaking – collating perspectives from theory and practice. At this point I wish to extend my sincerest gratitude to the authors who have generously given their time and expertise to contribute to this month's edition.

When we think of designing inclusive, accessible and age-supportive environments, do we consider the complexities and challenges ofdelivering effective designs in practice?And how academic research is translatedinto industry-based impact to deliver inclusive places? Often, for an architect or designer in practice, high level project aspirations of delivering best practice inclusion and accessibility are constrained by project briefs to no more than mere basic compliance with minimum regulatory standards, withany design moves seeking to go beyond mere compliance considered a 'luxury' or surplus to project requirements.

Where does this type of design practice leave the end users, now thirty-five years on from The Disability Discrimination Act 1995, and fifteen years on from The Equality Act 2010?Participatory-led research methods can offer a window into this world of lived experience. Through the lens of participant insights who might otherwise struggle to find their voices heard, and where the enormous value lies in socially orientated academia - gathering a robust body of research evidence which filters into policy and ultimately delivered through changes in practice.

The following five articles demonstrate the power of translating research into practice, from the development of tools to support good practices of inclusive design in action and the resultant impacts of community-led practice, to the latest research in findings addressing some of today's challenges in design practice such as integrating socially responsible ecological design and considering

the ethical considerations of applying minimum technical design standards.

My hope for you, the reader, is that you find this collection of articles insightful for your own working practices be that in the spheres of academia, practice, or both. Supporting us all to continue to work towards the most effective ways in which we can design for all, creating spatial and environmental equity - a better world for everyone.

Finally, I will wrap up with the words from another editorial piece dating back to 1965, from the UK's Invalid Tricycle Association (later becoming the Disabled Drivers Association) journal titled "The Magic Carpet":

> ***"To hell with the half-witted architect who dreams upfabulous ornamental buildings with not one scrap of common sense about them. He may bea great man [sic], but how much greater could he be if his dreams were less like nightmares to apercentage of the population."***
>
> *(1965, 'The policy meeting'Editorial, The Magic Carpet, 17, 4, Winter. The Invalid Tricycle Association, London; via Watson and Woods, 2005 Social Policy & Society 4:1, 97–105, Cambridge University Press)*

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DOING THE BARE MINIMUM:
COMPLIANCE-FOCUSSED ARCHITECTURAL ACCESSIBILITY

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ABSTRACT

The World Report on Disability (WHO and World Bank, 2011) positions disability discrimination as a human rights issue and identifies the physical environment as having 'a huge impact on the experience and extent of disability' – impacting the everyday lives of disabled people and perpetuating disablement, stigmatisation, and discrimination (Imrie, 1996; Hendren, 2020; Pérez Liebergesell et al., 2021) This paper contextualises technical accessible design practice in the UK by mapping the development of regulatory compliance standards alongside the emergence of disability rights and equalities legislation. By situating accessible design in the context of the social model of disability and human rights, the paper suggests a need for further research focussing on disabled people's experiences, and an examination of the professional and ethical responsibilities of the architect.

With compliance-focussed design practice remaining the conventional approach to accessibility, underpinned by basic minimum dimensions for spatial access which pre-date disability

rights (Shipley, Venn and Bell, 2025; Goldsmith, 1963; Liebermann, 2024); isn't it time we start calling out compliance-based accessibility as poor quality, discriminatory, and disrespectful of the rights of disabled people? And by claiming 'accessibility' when designs are in fact merely only minimally compliant – doing the bare minimum – and failing to recognise and address unethical practice?

KEYWORDS

Accessible Design; Accessibility; Architecture; Disability; Disability Rights; Inclusive Design; Architectural Discrimination; Building Regulations; Social Model; Disability Studies.

INTRODUCTION

THE PARADOX OF ACCESSIBLE DESIGN AND EXPERIENCES OF PHYSICAL ACCESS

The fundamental objective of the practice of accessible architectural design is to create accessible built environments, however this objective does not appear to be reflected in the everyday experiences of disabled people (Titchkosky, 2011; Liebermann, 2024). While the architect often sees accessibility through the lens of technical design guidance and compliance with nationally (and internationally) established dimensional compliance standards (Imrie, 2003), the everyday reality for most people living with disabilities is still fraught with widespread inaccessibility (Andre et

al., 2025; Kirk-Wade, 2023) in-part due to the design standards themselves being basedon minimum criteria, (British Standards Institute, 2018, p. 99) and are not sized appropriately for the majority of physically disabled people's access needs due to the activity spaces being too small (Arup, 2022). Consequently, many physically disabled people still face spatial barriers to accessing places and services despite these spaces being designed in accordance with the legal minimum design regulations (Building Regulations ADM, HM Government, 2015b; British Standards Institute, 2018; The Building Safety Act 2022).

> **"Even though access issues have been addressed by legislative procedures, particularly in the UK and US, access in even these countries remains something to analyse since it represents the question of legitimacy of social space for all." (Titchkosky, 2011, p. 9)**

DISABILITY PREVALENCE

In the UK, it is estimated that 24% of the population (approximately 16 million people) are disabled as defined under the core definition of 'disability' specified in the Equality Act 2010 (DWP, 2023; Kirk-Wade, 2023). The United Nations Convention of the Rights of Persons with Disabilities (UNCRPD, 2006) defines disability under a broader relational model:

> **"Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and**

> **effective participation in society on an equal basis with others." (UNCRPD, 2006 Article 1, p. 4)**

Under the UNCRPD definition of disability, the number of people living with disability in the UK is likely more than that reported by the Department of Work and Pensions (DWP) in 2023 which applies the Equality Act definition (Jackson, 2018; Lawson and Beckett, 2021).

The most common impairment type reported in the UK's 2021/22 Family Resources Survey (FRS) is mobility related, at a proportion of 47% of disabled people (DWP, 2023). Notably, the 'prevalence of disability rises with age' as 45% of disabled adults are over the state pension age (Kirk-Wade, 2023, p. 14). A generational demographic shift in the ageing population is a global issue, with the World Health Organisation estimating the proportion of people over the age of 60 is set to double by the year 2050 (WHO, 2024). This demographic shift also represents a significant increase in physical and cognitive disability, and age-related impairments, making the issue of appropriate accessibility in the built environment a primary concern (Henry et al., 2022)

BUILT ENVIRONMENTS AND THE RIGHT TO ACCESS

The World Report on Disability (WHO and World Bank, 2011) positions disability discrimination as a human rights issue and identifies the environment as having 'a huge impact on the experience and extent of disability'. The UNCRPD (2006) also highlights the importance of accessibility in the built environment under Article 9, stating that all Parties 'shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment' (UNCRPD, 2006

Article 9, p. 9). The significance of the environment in enabling equity and facilitating the rights of disabled people resonates strongly with the social model of disability (Oliver, Mike, 2013; Lawson and Beckett, 2021).

As such, it is clear the everyday lives of disabled people are directly impacted by the way in which architects design the built environment, with the potential to exasperate, create and perpetuate disablement (Imrie, 1996; Pérez Liebergesell et al., 2021). A key architectural feature which affects the physical accessibility of the built environment is the minimum dimensional spatial allowance for wheelchair turning, formed on technical plan drawings by a 1500millimetre (or 1.5metre) diameter circle (British Standards Institute, 2018) or a 1500mm by 1500mm square as indicated in the Building Standards Technical Handbook (2023) used in Scottish building regulation.

Significantly, the 1500mm wheelchair turning space in use today remains virtually unchanged since its inception over sixty years ago when it was first identified and published in the UK by Selwyn Goldsmith in *Designing for the Disabled: A Manual of Technical Information* (1963). At the time of publication in 1963, disabled people in the UK were not protected by the same rights and legal protections as the rest of the general population. People with disabling impairments were seldom seen nor included in general society because it was common practice to segregate people with physical and cognitive impairments within medical institutions or out-of-town asylums (Oliver, M., 1990).

Yet today the same physical dimension, the 1500mm turning space, underpins accessible spatial planning because it is the dimensional standard applied ubiquitously to plan drawings to demonstrate achieving compliance with the legal requirements of the building regulation, eg;The Scottish Government and Building Standards Division, 2023. In practice, despite the dimension being the minimum requirement for regulatory compliance, the 1500mm turning space is ubiquitously applied to technical plan drawings in any spaces requiring wheelchair accessibility, such as accessible toilets, domestic and non-domestic corridors, hotel rooms, assembly spaces, offices, leisure facilities, health, and educational buildings, see Fig. 1.

Figure 1 Typical architectural plan drawing showing typical application of the square 1500mm x 1500mm wheelchair turning space (highlighted in the red outlined yellow boxes). Image courtesy of anonymised architectural colleague.

Given the prevalence of the 1500mm turning space in accessible design practice, it is therefore important to consider the historical, social, and political context in which architectural accessibility was first conceived before critically appraising the effectiveness of contemporary accessible design practice. Goldsmith himself, the 'father of accessibility' (Richards, 2011), regarded the 1500mm turning space as 'a relatively crude' architectural design tool (Goldsmith, 1976, p. 151), because it was based on rudimentary and reductive theoretical diagrammatic assumptions of spatial manoeuvring patterns.

WHEELCHAIR ACCESS AS A FRAMEWORK FOR ENQUIRY

The proposed case study-like use of the 1500mm wheelchair turning space is to act as a 'golden thread' on which to contextualise and problematise accessibility in terms of design and experiential narratives of physical access. While it is not the only physical feature of accessible design practice, the fact that the wheelchair turning space requirement has remained uniquely unchanged since inception gives rise to enquiry – is the dimension still appropriate given recent empirical evidence suggesting otherwise (Arup, 2022)? Its origins in rudimentary ergonomics, anthropometry and pre-disability rights suggest it is more of a remnant of out-dated disability (in)equality and social attitudes of disabled people's limited place in society (Guffey, 2020).

Since the introduction of technical accessible design, other features have evolved and been revised to better meet the requirements of

the disabled population, such as doorway widths widened; ramps and stairs becoming less steep; brailletactile signage and paving have been introduced; and entrance doorway thresholds becoming step-free (Goldsmith,1963; Pickles, 1998; HM Government, 2015a).

Watson and Woods (2005) in their historical review of wheelchair accessibility in the context of advancements in 1930's wheelchair technology – the design of the tubular steel, light-weight folding wheelchairs – argue that the origin of formal, regulated built environment accessibility can be directly attributed to early advancements in wheelchair design;

> **"We would argue that wheelchairs have played a central element in the transformation of public policy as it pertains to disabled people [and] paved the way for legislation throughout the world, such as the Disability Discrimination Act in the UK. … [providing] the impetus for disabled people to campaign against their exclusion and to demand greater social justice." (Watson and Woods, 2005, p. 104)**

Using the wheelchair turning space as a framework for enquiry, a more focussed lens is generated through which to examine sociological accessibility, alongside the evolution of technical accessible design practice, integrating the micro, the specific 1500mm turning space, with the macro - social disability theory. Mooney Cotter (2007) suggests that to tackle disability inequality there is first and foremost a requirement for close attention to

detail, and thus bringing specific issues of inequality 'to the forefront of microscopic debate can only serve to advance all quests for equality'. (Mooney Cotter, 2007 p341). In terms of 'microscopic debate', the wheelchair turning space is a simplistic, and, as Goldsmith himself has stated a 'relatively crude' architectural planning device (Goldsmith 1976 p.151) drawn at scale on plan either in the form of circle with a diameter of 1500mm or as a 1500mm x 1500mm square. It is often cited as a standard allowance (albeit the minimum) for wheelchair users to manoeuvre a 180degree turn, ie; a space in which to change direction of travel, however in reality this additional space also functions as spatial accommodation for parents with babies in buggies, people using walking frames or crutches, people requiring support from carers, people with guide dogs, and basically anyone other than an a typically 'able-bodied' individual (Boys, 2014)

Could the unchanged wheelchair turning space be considered representative of a culture not fully on board with disability rights in general? And if so, does the routine application of this feature in every-day accessible design practice reflect continued ableism and disability discrimination? Is its unchanging existence and use in contemporary legislated regulations representative of broader systemic discrimination?

ACCESSIBLE DESIGN REGULATION AND THE CIVIL DISABILITY RIGHTS MOVEMENT

To address the wider critique of contemporary compliance-focussed accessible design, it is important to understand the historical social context through which accessible design was established and how

accessible design implementation has been influenced by the disability rights movement, and indeed vice versa;

> **"Wright's [Beatrice Ann Posner Wright] and Goldsmith's approaches provided an intellectual foundation to the disability rights movements of the 1960s and 70s, and gave disabled people a way to frame disability experience in ways that transcended medical findings alone." (Guffey 2020)**

Crosscutting disciplines of technical architectural design and social history of disability rights, paints a fuller picture of the state of accessibility today – that architectural accessible design practice is tarnished by compliance-based design thinking (Liebermann, 2024), while the social perspectives of those living with physical impairment paint a picture of continued architectural discrimination, and repeated calls for access equity and improved approaches in the creation of higher quality accessible environments (Goldsmith, 2000; Titchkosky, 2011; Boys, 2014). This dichotomy, where lived experiences of access inequality is at odds with the intended outcomes of regulated accessibility through technical building regulations, is telling of the issue at hand - that mere compliance with minimum regulations doesn't meet the access requirements, or basic human rights (Jackson, 2018) of a significant proportion of our population.

When Goldsmith's 1st edition of *Designing for the Disabled* was first published in 1963, the prevailing model of disability was the 'medical' or 'individualistic' model, seen in the terminology used by Goldsmith when using impairment-first language such as 'polios,

spastics, epileptics, multiple-sclerotics' (Goldsmith, 1963). Twenty years later, Mike Oliver's first publication, *Social Work with Disabled People* (1983), coins the term the 'social model of disability' based on the work of the Union for the Physically Impaired Against Segregation (UPIAS) from the mid-1970s.

> **"What we are interested in, are ways of changing our conditions of life, and thus overcoming the disabilities which are imposed on top our physical impairments by the way this society is organised to exclude us."**
>
> **(UPIAS founding statement, 1975)**

THE SOCIAL AND MEDICAL MODELS OF DISABILITY

While *Designing for the Disabled* was revised and updated over the course of its four subsequent editions (Goldsmith, 1967; 1976; 1997) to reflect changes to language (removing terms such as 'handicap' and 'paraplegics'), and addressing the growing politicisation of disability issues during the emerging disability rights movement of the 1970s (UPIAS, 1976; Oliver, 1993; Goldsmith 1997), the resultant legacy of out-dated language can be seen in architectural design guidance, policy and legislation, framed through the lens of the medical model (Imrie, 2003). Terms such as 'wheelchair user', and the categorisation of impairment such as 'ambulant', 'non-ambulant', and 'older-age' is still common place in contemporary building regulations and design guidance (Pickles, 1998; BSI, 2018; Approved Document M 2015). The 1500mm wheelchair turning space is also predicated on the notion that disabled building users have a pre-determined ability to self-propel

and transfer, since that is the basis on which Goldsmith conceived of the turning space in 1963.

In Mike Oliver's most recent commentary on the social model (2013), thirty years since his seminal publication (Oliver, 1983), Oliver makes clear that in the context of the UK's suffering economy and reformed approaches to disability benefits, services and support mechanisms, the social model is more relevant now than ever. Oliver specifically notes that current governmental approaches to public welfare and support have 'taken us back more than 30 years to the time before the social model came into existence' (Oliver, 2013), due to the individualisation of impairment on which severity and type of impairment are used to assess worthiness of publicly funded services and benefits.

Echoed in architecture, is the categorisation of impairment vs non-impaired 'able-ness' evident in the subdivision and separation of the UK Building Regulations. In the Approved Document M (ADM, 2015) people with physical disabilities are catered for in terms of access to buildings in a dedicated, or segregated part of the regulations. Since the first building regulations for disability access were published in 1987, little has changed in terms of the macro terminology and normative assumptions of 'able-ness', referring to 'wheelchair bound' 'wheelchair users' and 'wheelchair user houses' – akin with the medical model of individualised impairment.

The Approved Document M section of the building regulations is heavily weighted to wheelchair access, with requirements for people with visual impairments only being added in the guidance in 1999. Further echoing Goldsmith's approach to *Designing for the Disabled* (Guffey, 2020) is the pervasive and continued use of the 1500mm wheelchair turning space in common practice today, some 62years following its introduction (Goldsmith 1963) as the primary tick-box goal for achieving 'accessible' design compliance, as illustrated above on Fig 1.

BUILDING REGULATIONS – APROVED DOCUMENT T (UK)

In a further somewhat curious turn of events, UK's the recent 2024 Approved Document T (ADT) sets out the latest update to the building regulations for the design and construction of toilet provision, effectively clarifying that ADT 'universal toilets' do not require to be wheelchair accessible toilets;

> **"A universal toilet is not designed to be wheelchair-accessible: it is a toilet for universal use for all who choose to use it." (Approved Document T, 2024, section 1.10 p. 24)**

In adopting the term 'universal' when describing an all-inclusive gender-neutral WC facility, the ADT appears to ignore 'Universal Design' theory of inclusive disability access, as detailed by Goldsmith in his publication of the same name (2000). In the redefined 2024 version of the ADT, by suggesting that the ADT 'universal toilet' facility is for 'universal use for all who choose to use it', with the apparent explicit exception for those people

requiring wheelchair-accessible spaces, exemplifies further the segregated and individualised approach to impairment and access.

TESTING THE CURRENT MINIMUM STANDARDS

In 2022, the UK's Department for Levelling Up for Housing and Communities (DLUHC) published research originally commissioned as part of the consultative process for the development of amendments to the 2024 Approved Document T (Arup, 2022) in relation to the design requirements of public toilets. In the Arup report, the 1500mm wheelchair turning space was tested in 'real-life conditions', and revealed to be suitable for only 24.9% of the study's sample wheelchair user participants (Arup, 2022 p. 58).

The 'real-life conditions' were the analyses and measurement of real-time manoeuvres where people who routinely used wheelchairs in their daily life carried out a turn through 180degrees, using their own wheelchair, or being supported by someone to manoeuvre their wheelchair (as would be normal practice for them), unimpeded by physical restrictions (eg. walls) to move in the way their body naturally moves when carrying out such turning manoeuvre. The cross section of participants ranged from self-propelling manual wheelchair users, self-propelling powered wheelchair users, and assisted wheelchair users using manual wheelchairs. The study suggests a much larger optimum wheelchair turning space of 2500mm x 2500mm is required to accommodate 99% of independent wheelchair users to successfully carry out a 90degree turn. (Arup 2022, p.108).

What the Arup study reveals is the impact of measuring 'real-world' people, in the mode of 'real-life' moving and turning, resulting in ergonomic requirements which are much larger than that assumed during the desk-top derivation of turning spaces and assumptions made during Goldsmith's early development of the original wheelchair turning space (Goldsmith, 1963 and 1967; Arup 2022).

Further, the Department for the Environment, Transport and the Regions' (DETR) 2009 study on reference wheelchair dimensions indicates useability of the 1500mm turning space is limited to 85% of the wheelchairs included in that study; noting that this particular study does not measure these wheelchairs in use, in motion, include an assistant, allow for motorised wheelchairs, or measure the real-life turning space requirements as examined the Arup report (2022).

The Arup study appears to be unique in its approach of using disabled participants as experts in their own manoeuvring requirements, without imposing pre-defined requirements or specifying types of manoeuvres to be tested. Involving people with lived experience – disabled people themselves as experts in their own lives – in the technical ergonomics research was not a method employed by Goldsmith in pursuit of the design guidance in his early publications (Goldsmith 1963, 1967, 1997; Guffey, 2020). Goldsmith's desk-top theoretical analysis assumes a particular type of manoeuvre in the derivation of the 1500mm dimension, such that the wheelchair would be pivoted around a rear-central axis, with the inherent assumption that the person in the wheelchair has a strong

enough upper body in which to carry out such a turn – comparable to that of an able-bodied, average height male (Goldsmith, 1967;1997).

EMBODIMENT AND ERGONOMICS

In the 1997 *New Paradigm* revised version of *Designing for the Disabled* and again in *Universal Design* (2000), Goldsmith criticised the lack of ergonomic and anthropometric data available on physically disabled people, stating that the 'figures of ambulant disabled people are tall men' (Goldsmith 2010, p17). In chapter 3 of *Universal Design* (2000), Goldsmith goes into great detail reviewing and critiquing the available anthropometric and ergonomic resources available, particularly in pursuit of 'ambulant disabled people' and 'wheelchair users'. He cites the variability of the shapes and sizes of wheelchair users as a barrier to achieving a representative anthropometric sample in the form of a 'statistically normal distribution for any anthropometric measure' (Goldsmith 2010, p.24).

> **"Collectively therefore, in the context of anthropometric illustrations in diagrammatic form, it is admissible for normal able-bodied people to be surrogates for these wheelchair users. The effect of this is that independent wheelchair users can be represented by able-bodied people who are placed in wheelchairs." (Goldsmith 2010, p.25)**

Historically, representation of the various shapes and sizes of the human body in architectural practice is tainted by gendered

stereotyping and standardisation of people, reduced to mere 'building users'.

> **"Outdated conceptions of the body endure in the field [of architecture]. They have been shaped by centuries of venerating a particular physical ideal – while, male, able (and heterosexual) – exemplified by Leonardo da Vinci's Vitruvian Man, and in the twentieth century, le Corbusier's Le Modulor [modular man]… ubiquitous reference presents the body as a fixed physical entity, untouched by power dynamics and discourses that shaped lived experience." (Liebermann, 2024 p.4)**

Architectural Modernism of the post-war 20th century was dehumanising (Imrie, 1996) and the effect of 'form following function' has been to strip away the humanity of the people who use buildings, reducing the populations of people down to 'the modular man' (le Cobusier, 1927) and presenting humans as mere functional forms moving through spaces in a standardised and predictable way (Eileen Gray via Imrie 1996). It may therefore be unsurprising that Goldsmith was willing to overlook the realities of disabled embodiment and the shapes and dimensions of wheelchair users' bodies. The resulting effect being that the original wheelchair turning space repeatedly endures throughout five decades of revisions of his works and into formally regulated design practice.

> **"Accessibility is much more than admittance to a building or a matter of logistics, but is also a quality of socio-psychological experiences which modernist ideas did little to acknowledge."**
>
> **(Davies and Lifchez, 1987 via Imrie 1996 p88)**

CONCLUSION

Across many sociological discourses of disability and the built environment, there are repeated calls for action to 'improve accessibility' (Mackintosh and Heywood 2015; Fleck 2019; McKinney and Amosun 2020; Mathews et al. 2022; McCall 2022) in response to the experiences, barriers and discriminatory exclusion faced by physically disabled people when accessing the built environment.

In the 2023 *Access Survey* by *Euan's Guide*, with over 6000 respondents UK-wide, 79% of respondents reported they 'experienced a disappointing trip or had to change plans due to poor accessibility' of public places such as hospitality venues, leisure facilities, hotels, retail premises or other public services. A correlation is seen between the Euan's Guide Survey finding at 79% of people reporting negative experiences of accessibility, and the ArupDoc M Extension research (2022) in finding that 75% of the wheelchair study participants were unable to carry out successful turning manoeuvres within the commonly applied 1500mm wheelchair turning space (Arup 2022).

Titchskosky likens the ISO symbol of accessibility to the mere 'possibility or concept of access rather than the substantive reality' (2011), and Ross et al consider 'the normalized inattention to disability' in planning practice serves only the 'so-called "able bodies" much better than they do the disability community' (2023). Lieberman's *Architecture's Disability Problem* (2024) considers how contemporary practices of accessible design are framed as an

additional extra to normal practice, sometimes 'even a creative encumbrance' due to the everyday focus on 'normate [sic] bodies' (Liebermann, 2024).

Further to the mounting evidence indicating a problem with compliance-focussed accessible design practice, is the common contemporary assumption that modern buildings are equipped with enhanced or improved accessible design features compared to those of the past (Mathews et al. 2022). While this assumption is true for some elements of accessibility such as widened doorways, less steep ramps and stairs, improved tactility for visual impairment, higher quality lighting and acoustic technology to support hearing impairments; this is simply not true of the minimum requirements for wheelchair turning spaces. The unchanged dimensional minimum standard for wheelchair access is still relevant and more prevalent today given its place in legislated building regulation, despite rising evidence indicating the need for reform and revision of what constitutes an acceptable minimum spatial allowance.

> **"The beautiful complexity of disability requires that there cannot be a singular disability perspective that serves as a panacea for accounting for disability and ensuring accessibility and inclusion." (Ross et al., 2023)**

This paper corelates problems with physical access for wheelchair users in the built environment with the continued application of minimum dimensions for wheelchair turning spaces via the common practice of compliance-based accessible design in architectural practice. This problem is compounded by the fact that regulated

spatial requirements for wheelchair turning spaces, specifically the 1500mm turning space, has remained unchanged since its inception over sixty years ago, and might therefore potentially be considered an obsolete dimension in light of progression in the rights of disabled people, changes to wheelchair design, and the increased (now rightly normalised) presence of physically disabled people themselves in public spaces, alongside a growing ageing and disabled population.

Further research is therefore required to establish a robust, evidence-based solution which places the rights and wellbeing of the world largest intersectional minority – disabled people – at the forefront of any potential proposed change. The persistent issues of built environment access and architectural discrimination (Goldsmith, 2000) is complex and cannot be solved by simple solution-based problem-solving methodologies. Broader cultural change is required in design practice in the way accessibility is approached and applied, bringing together architectural accessibility and the social model of disability. Upgrades to the minimum dimensional requirements to a more inclusively sized, larger wheelchair turning spaces might be a start, but the issues of systemic ablism, rooted in the medical model of disability, still underpin the format, terminology and ultimately the message of the building regulations. Indeed, another potential angle for change is a broader reinterpretation of building regulations where accessibility is no longer delineated in a separate section but distributed more holistically throughout the various technical design requirements, combined with changes in terminology to reflect the requirements of accessible design through the lens of the social model of disability.

And most importantly, any considerations of problem-solving through future research activities will require to centre the highest value expertise of the 'voices of experience' of those disabled by the built environment (Imrie, 1999; Boys 2014) to best inform the many ways in which we can truly *design for all.*

REFERENCES

The Building Safety Act, Available at: https://www.legislation.gov.uk/ukpga/2022/30/contents/enacted (Accessed: 13/08/2024).

Andre, D., Hollomotz, A., Priestley, M., Lavery, M. and Hadi, F. (2025) The lived experience of disabled people in the UK: a review of evidence UK: Gov.uk.

Arup (2022) Part M Research Extension: Toilets. London: Department of Levelling Up for Housing and Communities. Available at: https://assets.publishing.service.gov.uk/media/64d63baedd15ff0014277fd4/Part_M_Research_extension_toilets_research_report.pdf (Accessed: 26/03/2024).

Boys, J. (2014) Doing disability differently: an architects handbook on architecture, dis/ability and designing for everyday life London: Routledge.

British Standards Institute (2018) BS 8300-2:2018: Design of an accessible and inclusive built environment London: British Standards Institute.

DWP (2023) Family Resources Survey: Financial year 2021-22. London: The Department for Work and Pensions (DWP), The UK Government. Available at:

https://www.gov.uk/government/statistics/family-resources-survey-financial-year-2021-to-2022 (Accessed: 15/11/2023).

Goldsmith, S. (2000) Universal Design. 1st edn. Jordan Hill: Routledge.

Goldsmith, S. (1997) Designing for the Disabled The New Paradigm. 1st edn. Routledge.

Goldsmith, S. (1976) Designing for the disabled. 3rd ed., fully revised / diagrams by Louis Dezartedn. RIBA Publications.

Goldsmith, S. (1967) Designing for the disabled. 2nd ed. revised and expanded. edn. London: Royal Institute of British Architects.

Goldsmith, S. (1963) Designing for the disabled London: RIBA.

Guffey, E. (2020) 'Selwyn Goldsmith's designing for the disabled, 2nd ed. (1967): Flawed, dated, and disavowed, yet a classic with enduring value', She Ji: The Journal of Design, Economics, and Innovation, 6(4), pp. 439–454 Available at: https://doi.org/10.1016/j.sheji.2020.04.002.

Hendren, S. (2020) What can a body do? : how we meet the built world New York: Riverhead Books.

Henry, G., Noel-Smith, J., Palmer, L., Quirke, M. and Wallace, K. (2022) Environments for Ageing and Dementia Design Assessment Tool (EADDAT) Stirling: Dementia Services Development Centre (DSDC), University of Stirling.

Approved Document M: access to and use of buildings, volume 1: dwellings (SI year and number). Available at: https://assets.publishing.service.gov.uk/media/5a7f8a82ed915d74e622b17b/BR_PDF_AD_M1_2015_with_2016_amendments_V3.pdf (Accessed: 12/03/2024).

Approved Document M: access to and use of buildings, volume 2: buildings other than dwellings (SI year and number). Available at: https://assets.publishing.service.gov.uk/media/5a7f8a82ed915d74

e622b17b/BR_PDF_AD_M1_2015_with_2016_amendments_V3.pdf (Accessed: 12/04/2024).

Imrie, R. (2003) 'Architects' conceptions of the human body', Environment and planning. D, Society & space, 21(1), pp. 47–65 Available at: https://doi.org/10.1068/d271t.

Imrie, R. (1996) Disability and the city. 1. publ. in the United States edn. New York: St. Martin's Press.

Jackson, M.A. (2018) 'Models of Disability and Human Rights: Informing the Improvement of Built Environment Accessibility for People with Disability at Neighborhood Scale?', Laws, 7(1), pp. 10 Available at: https://doi.org/10.3390/laws7010010.

Kirk-Wade, E. (2023) UK disability statistics:

Prevalence and life experiences (Research Briefing). London: The UK Government. Available at: https://researchbriefings.files.parliament.uk/documents/CBP-9602/CBP-9602.pdf (Accessed: 15/11/2023).

Lawson, A. and Beckett, A.E. (2021) 'The social and human rights models of disability: towards a complementarity thesis', The International Journal of Human Rights, 25(2), pp. 348–379 Available at: https://doi.org/10.1080/13642987.2020.1783533.

Liebermann, W.K. (2024) Architecture's Disability Problem Routledge Research in Architecture. 1st edn. Oxford: Routledge.

Mooney Cotter, A.D. (2007) This Ability: An International Legal Analysis of Disability Discrimination Abingdon: Taylor & Francis Group, pp. 341–352.

Oliver, M. (1990) The politics of disablement Basingstoke: Macmillan.

Oliver, M. (1983) Social Work With Disabled people. Practical Social Work Series. 1. publ. edn. London [u.a.]: Macmillan.

Oliver, M. (2013) 'The social model of disability: thirty years on', Disability & society, 28(7), pp. 1024–1026 Available at: https://doi.org/10.1080/09687599.2013.818773.

Pérez Liebergesell, N., Heylighen, A., Leuven, K.U. and Peter–Willem Vermeersch (2021) 'The Hidden Unwelcome: How Buildings Speak and Act', Journal of Interior Design, 46(3), pp. 3–10 Available at: https://doi.org/10.1111/joid.12203.

Pickles, J. (1998) Housing for Varying Needs Part 1: Houses and Flats Edinburgh: The Stationary Office.

Richards, S. (2011) 'Selwyn Goldsmith (Obituary)', The British journal of occupational therapy, 74(7), pp. 359 Available at: https://doi.org/10.1177/030802261107400702.

Ross, T., Buliung, R., Titchkosky, T. and Hess, P. (2023) 'Engaging Disability Theory in Planning Practice', Journal of planning education and research, , pp. 739456 Available at: https://doi.org/10.1177/0739456X231175595.

Shipley, A., Venn, A. and Bell, S. (2025) Why is Bristol City Council's resolution to make the city accessible for disabled people the exception, not the norm? Bristol: Sensing Climate.

Building standards technical handbook April 2024: non-domestic buildings (SI year and number). Available at: https://assets.publishing.service.gov.uk/media/5a7f8a82ed915d74e622b17b/BR_PDF_AD_M1_2015_with_2016_amendments_V3.pdf (Accessed: 23/06/2024).

Titchkosky, T. (2011) The Question of Access: Disability, Space, Meaning Toronto: University of Toronto Press.

UPIAS (1975) Fundamental Principles of Disability. London: Union of the Physically Impaired Against Segregation, Disability Alliance. Available at: https://disabledpeoplesarchive.com/fundamental-principles-of-disability-union-of-the-physically-impaired-against-segregation/ (Accessed: 29/08/2024).

Watson, N. and Woods, B. (2005) No Wheelchairs Beyond this Point: A Historical Examination of Wheelchair Access in the Twentieth Century in Britain and America Cambridge University Press (CUP).

WHO (2024) Ageing and Health. Available at: https://www.who.int/news-room/fact-sheets/detail/ageing-and-health (Accessed: 12/07/2024).

WHO and World Bank (2011) World Report on Disability. WHO and World Bank. Available at: https://www.who.int/publications/i/item/9789241564182 (Accessed: 28/08/2024).

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Jacquel Runnalls (Dip COT, MSc) is a housing occupational therapist and accessible and inclusive environments specialist who oversees the design of inclusive, accessible and adaptable housing development from concept design through to post occupancy evaluation.

Jacquel works across public and private sectors with a range of stakeholders, including disabled and older people in their own homes, gaining a unique insight into the barriers created due to poor design and stigmatising aesthetics.

Jacquel worked with several Mayor of London projects including the first 2004 Supplementary Planning Guidance "Accessible London:achieving an inclusive environment" which introduced planning requirements for90% Lifetime Homes and 10% wheelchair standard for all new homes, Wheelchair Accessible Housing Best Practice Guidance and the London Accessible Housing Register. She completed a Masters in Accessibility and Inclusive Design in 2011(distinction) for which her dissertation considered Post

Occupancy Evaluation with residents of new build wheelchair housing. She has provided expertise to the Access group of the English Technical Housing Standards review leading to ADM Volume 1; co-authored the Wheelchair Housing Design Guide (Habinteg, 2018); authored the Inclusive Housing Design Guide (Habinteg, 2024). Jacquel has also previously been invited to present on UK Housing Standards at a conference in Hong Kong and to give evidence to two parliamentary inquiries: 2018 ' Housing for older people' and in 2024 ' Disabled People in the Housing Sector'.

Jacquel was previously the Royal College of Occupational Therapist's Specialist Section in Housing's UK lead on Accessible and Inclusive Housing and is currently a member of the British Standards B/559 committee (accessible and inclusive built environment) and the Access Association.

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2

THE INCLUSIVE HOUSING DESIGN GUIDE

By:Jacquell Runnalls

Introduction

The Inclusive Housing Design Guide (IHDG) was commissioned by Habinteg with support from the Centre for Accessible Environments (CAE) and published by the Royal Institute of British Architects (RIBA).

As the author I am extremely grateful for the support of my colleague and lead peer reviewer, Dr Marney Walker, also an experienced housing occupational therapist (OT). Marney encouraged me to share my learning gained from a career as a housing OT working with a diverse range of people of all ages and abilities in their own homes and communities, so seeing first-hand the barriers created by poor design and aesthetics. This is alongside overseeing the design and delivery of inclusive, accessible and adaptable, mixed-tenure housing developments (general needs and supported housing) from pre-planning to post occupancy evaluation (POE). Additional, invaluable peer review was undertaken by well-respected professionals from a range of backgrounds working in the field of inclusive design.

Learning from experience

The IHDG is based on documents I wrote as a specialist housing OT working with an inner London estate regeneration team. These were additionally informed by a wide range of good practice guidance and research, and my MSc in Accessibility and Inclusive Design dissertation which considered Post Occupancy Evaluation (POE) of new build wheelchair housing;and as a member of the English Government's Technical Housing Standards Review Access group which led to the 2015 Building Regulations ADM Volume 1 for dwellings (ADM), co-authoring Habinteg's 2018 Wheelchair Housing Design Guide and a working knowledge of applying ADM.

Occupational therapy and housing

The philosophy of OT is underpinned by a holistic, person- centred approach, with the key aim to enable people to live life in the way they wish.

My own experience has been additionally informed by working in adult social care and home adaptations, housing and homeless advice, allocations and lettings, and property services. This work involves advocating for disabled and older people; undertaking person-centred assessments of housing need; setting up and overseeing Accessible Housing Registers (AHR); assessing empty properties to determine accessibility/adaptability and undertaking viewings of property offers with disabled applicants. Where Housing OTs are employed across these areas it enables us to provide data for planners and developers to ensure housing development (general

and specialist) meets the evidenced need, including size and type of dwellings.

All these roles have involved overseeing the design and delivery of new housing development, working with a range of stakeholders including planners, building control, developers, housing providers, architects, designers, surveyors, engineers, design out crime officers, contractors and product manufacturers. My involvement starts from design concept right through to completion to ensure homes not only meet regulations but are functional, flexible, inclusive, and ultimately fit for purpose. I visit site regularly throughout, recommend robust, quality, easy to use, flexible and adaptable, non-clinical fixtures, fittings and finishes. This often includes explaining why designs and products may or may not meet end user requirements. After handover I attend viewings with prospective occupants and undertake later detailed POE, providing unique insights and learning to ensure practice is updated and mistakes are not repeated.

Apeksha Gohil explains the added, unique value Ots can bring to an inclusive design approach;

> **"their specialised knowledge of human functioning, disability, occupational performance, person-environment interaction which his supplemented by their skills in occupational analysis and environmental adaptations…areas of professional knowledge, skills and abilities that other professionals, such as designers, architect, and builders lack."**

Experience has shown that employing Housing OTs not only avoids disruptive retrofitting but provides significant savings and further far-reaching benefits. Case studies from my practice are in the IDHG and my Housing OT colleague in Richmond and Wandsworth is currently evidencing the cost savings to home adaptations budgets that our roles in overseeing new build homes provide. Approximate estimates indicate £2million (without considering wider benefits to the public purse). It is therefore essential that appropriate expertise is employed through all RIBA stages for new housing development, as supported in the Inclusive Design Overlay to the RIBA Plan of Work

Regulatory background

New English building regulations were introduced in 2015 - Part M: Access to and use of Buildings, Volume 1: Dwellings. It contains three categories, - M4(1) Category 1: Visitable, M4(2) Category 2; Accessible and adaptable, and M4(3) Category 3: wheelchair dwellings. Both M4(2) and M4(3) are optional unless required by the local planning authority (LPA) or through developer choice. Some LPAs acknowledge the need for the optional categories. For example London requires 90% M4(2) and 10% M4(3).

10 years since these regulations were introduced, I still consistently come up against a lack of understanding and misconceptions including thinking M4(2) and M4(3) are aspirational as opposed to minimal, misunderstanding key differences between the two and

when and how to apply them. Unfortunately ADM lacks critical detail and explanation and are non-inclusive: only considering physical impairment and underpinned by dated anthropometric and demographic data.

Need for guidance

I was acutely aware of the need to address these issues by providing practical, user-friendly guidance which demonstrates the impact design decisions have for their occupants and how to design and deliver genuinely accessible, adaptable, inclusive, and sustainable housing to enable people to live fulfilled lives. To communicate these issues detailed technical information is therefore needed that includes supporting plan, elevation and fully furnished drawings and images based on my working knowledge, alongside user insights. I also wanted to provide additional considerations to outside space and how housing development connects with its surrounding neighbourhood. Again, these aspects are not considered in ADM but can impact on whether a person is able to get out of their home or not.

Overview

The IHDG sets out the principles of Inclusive Design, OT and the housing and regulatory, planning and associated guidance which underpins the guide. There are three main standalone sections: Part One:Strategic Site Housing, connectivity and outside space, Part Two: Accessible and adaptable housing (for all general housing) and Part Three: Wheelchair housing (not only applicable to wheelchair

users but where people may require more space). Two appendices at the end build on my Site Briefs by providing a wide range of good practice resources (important to keep up to date) and wheelchair space standards (absolute minimum but a guide for planners/developers).

Aims and intentions

It was important to demonstrate how inclusive design can be delivered at minimal or no additional cost and embed design considerations that not only consider physical impairment but a much broader range of people, including those with sensory and cognitive impairments, neurodivergent people and to generally promote health and wellbeing. Simple but critical considerations include visual contrast, reducing glare and shadows, lighting which provides choice and control, acoustics/noise and access to biophilia such as greenery and views out.

An outdated perception persists that an accessible and adaptable home means one which is expensive, time-consuming to design and build, and clinical in appearance. I was therefore keen to demonstrate how inclusive, non-stigmatising, aesthetically pleasing, quality/robust fixtures, fittings and finishes can be provided at no or minimal extra cost. The significant benefits for both occupants and developers are surely a missed marketing opportunity. Sadly, I still find myself asking those specifying if they would accept a certain feature or product in their own home to which they reply 'No!'. So why is it acceptable for anyone else? Those of us who work in the

field are also aware of the extensive research evidencing need and demonstrating the financial and societal benefits, so why is this still not filtering through?

One of the key intentions of the guide was to provide the rationale for exceeding minimum requirements of ADM, address the missing detail, and lack of understanding and insight relating to aspects such as minimal spatial requirements, including how people move and use spaces inside and outside their home, and to demonstrate why certain layouts or features do not work in practice. Drawings therefore show a range of life-sized people (thank you to Carly Dickson, architect and illustrator), stacks and pipework, using dark blue shading on drawings to indicate the minimum (ADM) and light blue shading for recommended (good practice), such as access zones, turning circles.

It was also critical to show how to achieve good practice in relation to other major barriers to physical access, such as negotiating heavy doors (security/fire) and accessible door thresholds. These require careful design and attention to detail on site, yet I had to provide specifications and photos of installed level and zero thresholds from my own practice to the architects producing the drawings who said they could not be achieved. This further highlighted the need for not only technical guidance and drawings but User Insights and Case Studies (based on 'Notes' in my site briefs) to show why attention to detail matters, how certain features impacts peoples' lives, and that I am not just asking for the sake of it! Since publication feedback on these aspects has been extremely positive.

Finally, whilst basic references are made to culture and faith, they were not considered in detail nor other aspects such as gender, sexual orientation. We were unable to consider emergency egress and management and maintenance, but I am aware that these are critical in ensuring housing development is inclusive and does not discriminate. Otherwise, I hope readers are encouraged to read the IHDG.

Publication notes

Unfortunately some international books were inferior black and white copies so please ensure yours is in colour. As readers have also highlighted, the E-book does not replicate the IHDG's layout, use of colour, ordering or image sizing and placement. I have consistently requested a PDF be made available and Habinteg hope one will be available to purchase soon.

Jacquel Runnalls, 31st July 2025

REFERENCES

1. *HM Government 2015. The Building Regulation 2010, Approved Document M, Access to and use of buildings: Volume 1: Dwellings, 2015 Edition incorporating 2016 amendments. https://assets.publishing.service.gov.uk/media/5a7f8a82ed915d74e622b17b/BR_PDF_AD_M1_2015_with_2016_amendments_V3.pdf (accessed 31 July 2025)*

2. *Centre for Accessible Environments (CAE). 2018 Wheelchair Housing Design Guide, London: RIBA Publishing*

3. *RIBA, 2023 Inclusive Design Overlay to the RIBA Plan of Work. https://www.architecture.com/knowledge-and-resources/resources-landing-page/inclusive-design-overlay-to-riba-plan-of-work (accessed 31 July 2025)*

4. *Gohil, A.R. 2016. Universal Design Consultation Guide: For Occupational Therapy Practitioners, University of Illinois, Chicago, p2.*

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Magdalena's main area of expertise is retrofit and preservation of existing built environment, rooted in the research into relationships between buildings and people. She has over a decade of experience working in public and private sector as a Senior Architectural Technologist. She is a PhD candidate at Robet Gordon University (RGU) in Aberdeen, researching health promotion and psycho-social determinants of health in the context of neighbourhood scale retrofit. She also leads a module on low impact construction.

Magdalena is a Chartered Architectural Technologist, Knowledge Exchange Coordinator for Chartered Institute of Architectural Technologists (CIAT) Scotland East, promoting learning in the industry with the emphasis on support for women. She is a Director and a Vice-chair of the Scottish Ecological Design Association (SEDA) where she leads the Health and Wellbeing group. She is also a member of Living Futures Institute.

Magdalena co-led research on the Heat and Energy Efficiency Technical Suitability Assessment (HEETSA) for the Scottish

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Jonathan is a Course Leader in Architectural Technology at RGU, since the summer of 2010. Jonathan has responsibility for preparing curriculum changes for the course, preparation for accreditation with PSRB, IQA monitoring processes, alongside mentoring and leading new course team members. PSRB and IQA process systems have both noted the course and content as exemplary examples of the course nationally and internationally. He has been actively involved in PSRB related activities, e.g. Chair of Accreditation Panels, Chair and panel member for chartered professional interview at Chartered and Fellow levels, alongside being a judge for CIAT student technical awards.

Jonathan has been more involved at School and Faculty levels leading marketing and representing the School across a breath of University wide forums and boards. As part of the role Jonathan sees the continuation of his established research skills through consultancy and larger multi-disciplinary research applications.

Jonathan's PhD was titled "Optimising The Relationship Between Passive Solar Design Of New Housing AndThe Economics Of Construction And Land Value". This research continues his personal

interest in alternative energy, particularly passive solar and whole-house techniques, which reduce the need for non-renewables.

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3

RETROFITTING HOMES FOR GENDER EQUITY AND WELLBEING: A SALUTOGENIC PERSPECTIVE

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ABSTRACT

The relationship between the built environment and human health is increasingly recognised; however, retrofit practice continues to address health primarily through a pathogenic lens, focusing on risks associated with substandard housing conditions. Current retrofit standards prioritise technical performance, often overlooking the unintended social consequences – particularly, the potential to exacerbate existing health inequalities. Furthermore, retrofit policy and delivery remain predominantly carbon-driven, with insufficient attention to how interventions might foster resilience, social cohesion, and wellbeing at the neighbourhood scale.

Psycho-social determinants of health, which shape individual's ability to interpret and cope with their environments, remain underexplored in retrofit assessment and practice. A salutogenic approach to environmental design, grounded in Antonovsky's concept of health promotion, offers a promising alternative –

focusing on long-term health and wellbeing by supporting Sense of Coherence (SOC): meaningfulness, manageability, and comprehensibility in people's everyday settings.

This paper draws attention to gender-specific vulnerabilities, particularly those experienced by women due to socio-economic inequalities as highlighted by UN Women. It argues that these inequalities influence women's priorities in the home, especially regarding safety, autonomy, and control. By employing a phenomenological evaluation of lived experience within a small sample group, the study explores how motivations for retrofit are shaped by these gendered needs. It advocates for neighbourhood-scale, place-based retrofit strategies that incorporate a human-centred, salutogenic framework, recognising wellbeing, inclusion, and life course health as essential to sustainable and equitable retrofit outcomes.

INTRODUCTION

Residential buildings are a major source of carbon emissions in the United Kingdom, with domestic energy use – particularly for heating – accounting for a substantial share of total emissions (CCC, 2023). As a result, housing retrofit – defined as the upgrading of building fabric and heating systems to improve energy efficiency – has emerged as a focus in the UK's decarbonisation strategy. Retrofit is also framed as a means of mitigating fuel poverty and addressing substandard housing conditions (Scottish Government, 2021). However, current retrofit frameworks remain largely carbon-centric,

narrowly focused on quantifiable performance metrics and cost-benefit calculations. This carbon-centric lens frequently overlooks the broader psycho-social, relational, and life-course dimensions of home, particularly how changes in personal circumstances can alter individual's perceptions of home and their sense of wellbeing (Cleland, et al.,2015; Feijten& Mulder, 2005; Plagnol& Scott, 2011).

A significant body of literature has examined the symbolic, emotional, and affective meanings of home (Sixsmith, 1986, Mallett, 2004; Easthope, 2004), yet these findings are rarely integrated into retrofit policy or practice (Baker, et al., 2025; Bolton et al., 2023). The home is not simply a shelter; it is a place embedded with meanings that shift across time and life stages. In the context of domestic retrofit, health is typically treated through a pathogenic paradigm, focusing on how inadequate housing contributes to physical illness and healthcare costs (Garrett et al., 2021; 2023). This approach undervalues the psycho-social dimensions of housing (Marmot, 2010, 2020), such as autonomy, control, safety, emotional security and meaning, which are fundamental to subjective wellbeing (Diener, 1984; Evans, et al., 2003; Doyal & Gough, 1991).

There is a need to reframe retrofit through a human-centred lens, one that treats wellbeing as a primary outcome rather than a secondary benefit. The National Health Service's (NHS) growing emphasis on ageing in place, post-hospital recovery within a familiar setting, and the creation of safe and supportive home environments points to a reconceptualization of housing as an enabler of preventative health strategies (Public Health Scotland, 2021; Scottish Government, 2021). Within this framework, the quality of

retrofit must extend beyond thermal efficiency and encompass factors such as adaptability, usability, and the ability to support long-term psycho-social wellbeing.

The notion of health-promoting environments draws on theories such as Gibson's (1979) concept of environmental affordances, which explores how individuals perceive and interact with their surroundings in relation to their capabilities. This resonates with Antonovsky's (1987) theory of salutogenesis, which emphasises the development of a sense of coherence (SOC) as a means of enhancing resilience and coping capacity. SOC is underpinned by three core components: manageability (the perception of autonomy and control), comprehensibility (the ability to understand one's environment), and meaningfulness (a sense of purpose and belonging).

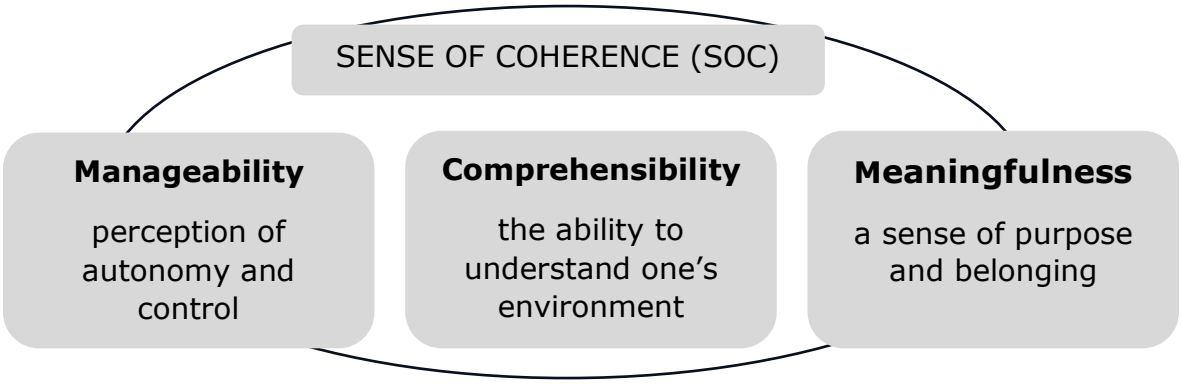

Fig. 01 – Components of the sense of coherence (SOC) – by authors.

GENDER, HOUSING, AND THE STRUCTURE OF INEQUALITY

Gendered dimensions of housing, while currently underexplored in retrofit literature, are crucial to understanding how homes are

experienced, especially in times of transition or instability. Women are more likely to bear the burden of unpaid care, manage domestic responsibilities, and reside in lower-quality housing – particularly as single parents, older adults, or informal workers (Shelter Scotland, 2024; UN Women, 2020). These roles frequently restrict economic independence, reduce pension entitlements, and increase the risk of housing insecurity in later life (Santos Silva & Klasen, 2021; Brett & Macfarlane, 2022). Depression, anxiety, and chronic stress are more prevalent among women, often exacerbated by caregiving responsibilities, economic instability, and insufficient social support (Kessler, 1993; Paykel, 1991; WHO, 2023). Importantly, these psycho-social stressors not only affect immediate wellbeing but also increase the long-term risk of conditions such as dementia (Luo, et al., 2023; Mielke, 2018; Stuart, et al., 2020). Additionally, life events resulting in a requirement of cognitive adaptation can be as significant as socio-economic stressors. (Alder, 1995).

Understanding how women perceive, interact with, and make decisions about their home environments is therefore essential to the development of equitable retrofit strategies. Salutogenic theory, rooted in medical sociology, offers a framework foregrounding the importance of emotional security, autonomy, and belonging as determinants of health (Antonovsky, 1979; 1987; Eriksson & Lindström, 2006).

METHODOLOGY

This paper presents findings from the first phase of a wider doctoral study, employing Interpretative Phenomenological Analysis (IPA) to explore how a small sample of women in rural North East Scotland

experienced their homes in light of changing life circumstances. IPA is rooted in phenomenology and idiographic philosophy, focusing on how individuals make sense of their lived experiences (Smith, et al., 2009).

The sample included four women:

1. **A working mother preparing to relocate due to perceived misalignment between her home and evolving family needs.**
2. **A working mother and social housing tenant transitioning into homeownership.**
3. **An elderly woman who recently moved into the community, prioritising home that can be upgraded to meet her long-term needs.**
4. **An elderly woman who had raised her family in the same home and remained for reasons of familiarity and stability.**

These narratives form the foundation for a broader mixed-methods inquiry. Subsequent stages of the research will involve a quantitative survey to capture wider patterns and validate emerging themes. Together, these stages aim to inform retrofit strategies that are socially responsive, gender-aware, and grounded in lived realities across the life course.

LIFE EVENTS, HEALTH, AND THE MEANING OF HOME

The women's reflections revealed that their homes were not static backdrops, but active participants in their life trajectories. For each, the home was seen as a site of care, work, parenting, recovery, and identity. Decisions about moving or upgrading were rarely based

solely on cost or energy savings; rather, they were driven by life events, transitions such as loss, illness, ageing, family or employment changes. These transitions triggered emotional reassessments of what the home provided: was it manageable, comprehensible and meaningful?

Interview responses demonstrated how disruptions in life circumstance often led to a misalignment between the affordances (Gibson, 1979 Golembiewski, 2023) within the home environment and the occupant's evolving needs. Homes that were once adequate became sources of stress when they failed to support safety, independence, or family routines. These experiences were mapped with Maslow's (1943) hierarchy of needs in the context of housing, where safety and security as well as love and belonging were identified by the participants as fundamental to long term health and wellbeing. Homes were evaluated by the interviewed women through an affective lens that acknowledged social and relational dimensions of their domestic settings (Lefebvre, 1991; Somerville, 1997). Responses, as highlighted in the table below, revealed deeply personal experiences of control, acceptance, connection and helplessness where physical constraints within the home were perceived as barriers that shaped behaviours, impacted health, and affected overall wellbeing.

Phenomena associated with occupant needs and sense of coherence (SOC) within domestic setting	
Phenomenon of control	**Relative to manageability and comprehensibility – individual's ability to**

	understand their circumstances, identify sources of support, navigate available resources, and feel empowered to act. Sense of personal agency, self-efficacy, and motivation. In the context of housing, the ability to make autonomous decisions, feel safe, and understand how to navigate one's environment and circumstances.
Phenomenon of acceptance	**Relative to manageability and comprehensibility – individual's negotiated adaptation, adjusting behaviours and expectations in response to housing limitations they could not control, often due to financial or spatial constraints. Coping strategies were reported to be shaped by necessity rather than choice.**
Phenomenon of connection	**Relative to meaningfulness - social and emotional dimensions of housing, such as relationships formed within the home, the significance of memories (e.g., raising children), and a sense of belonging to the community. Also, home's placement within its wider spatial context, including natural elements (trees, garden, parks), proximity to the street, architectural character, and opportunities for personalisation.**
Phenomenon of helplessness	**Relative to manageability and comprehensibility but also meaningfulness – perception of housing limitations causing**

	distress and uncertainty. Participants described feeling overwhelmed, unsure of how to address issues, and unsupported in navigating solutions. This often led to feelings of shame, frustration, and being 'stuck' in inadequate housing, where the lack of clear guidance or effective assistance undermined sense of control, dignity, and emotional connection to the home.

Fig. 02. Results of IPA analysis of lived experience of home and associated needs – by authors

In several cases, the emotional labour required to 'make do' with poor layouts, draughty and cold rooms, or inadequate bathrooms, was evident to be detrimental to occupant's mental wellbeing and sense of control. In some cases, women accommodated these limitations by adjusting their behaviours, negotiating a balance between what one participant called their 'needs and wants'.

SOCIAL CONNECTEDNESS AND COPING STRATEGIES

The women's sense of wellbeing was also closely tied to social connectedness within their neighbourhoods. Relationships with neighbours, proximity to services, and access to trusted help were critical in shaping their experience of home. Studies confirm that perceived social connectedness is a key determinant of mental health and life satisfaction (Zavaleta, Samuel & Mills, 2017; Creaven et al., 2018). This was particularly salient for grandmothers and mothers who were the primary caregivers, limited by inadequate

childcare provision or who relied on informal networks to manage work-life balance and care duties. The importance of community cohesion and effect on health resilience despite structural challenges resonate with findings of Vaandrager and Kennedy (2022).

A strong SOC was evident when women had access to trusted sources of advice and support. The importance of having knowledgeable, empathetic advisors – especially during home upgrades – was repeatedly emphasised. Participants wanted retrofit guidance that was not abstract or generalised, but relatable and tailored to their particular house, life stage, and budget. One woman highlighted the importance of having someone to help ensure she wasn't being taken advantage of, while another spoke confidently about the guidance she received from a trusted source. But generalised and inadequate advice was also seen as lack of control over own situation, where one woman emphasised the feeling in a very emotional way:

> ***'What I wanted was for someone to come in my house and say: do you know something? have you ever considered doing this? This is where you'll get your biggest benefit from, and just that, I suppose honest conversation […]. But tailored to my house, not a generalised sort of advice that […] is based off the South of England.'***

The absence of such support led to feelings of helplessness and frustration. Retrofit interventions were perceived not only as physically disruptive but emotionally intrusive, particularly when household dynamics were being overlooked. One participant described an unannounced visit from a social landlord as an intrusion of her home as a safe space for her family, calling it a '*horrible feeling'*. Another expressed that it felt '*like our house isn't our house anymore'*, while discussing planning constraints echoing broader concerns around agency, autonomy and the ability to make sense of one's circumstances.

GENDER, EMPLOYMENT, AND HOUSING AS INFRASTRUCTURE FOR CARE

The research also highlighted how housing functions as infrastructure for unpaid care and economic participation. Working mothers in the study used their homes as sites for remote work, managing employment alongside domestic duties. However, inadequate space, poor thermal comfort, and lack of privacy compromised both productivity and wellbeing. This intersects with a broader critique of the care economy, which remains structurally undervalued and disproportionately carried by women (UN Women, 2024).

Brett and Macfarlane (2022) highlight how women in Scotland face barriers to job flexibility, pay gaps, and fragmented employment histories, which cumulatively diminish economic independence. If retrofitted homes can reduce fuel poverty, improve thermal comfort,

and support remote work, they could serve as enablers of gender equity. Conversely, failure to account for gender-specific needs risks reinforcing inequalities.

AGEING, RETROFIT, AND FUNCTIONAL ABILITY

Ageing was discussed with all participants but perhaps a central concern for the older contributors was a wish to remain in their homes long term. Each had taken steps to adapt their environments, installing handrails, walk-in showers, but remained concerned about future limitations (layout, accessibility, thermal comfort: both cold and overheating risks). Given the growing proportion of older women in the population (Scottish Government, 2020) and reliance on informal and local support networks, retrofit strategies must accommodate ageing-in-place priorities, including ethical consideration for people living with dementia. The World Health Organization (2017) has also drawn attention to the gendered burden of dementia: women not only represent the majority of those affected but also provide the bulk of informal care.

WHO's (2015) proposition of 'functional ability' in later life expands the concept of health to include social participation, purpose, and autonomy. In this light, homes should be evaluated not just as safe or accessible but as capable of enabling continued contribution and meaning. Koelen and Eriksson (2022) advocate for a shift from healthy ageing to salutogenic ageing, emphasising that older people's wellbeing is shaped by familiarity, agency, and the capacity

to maintain social ties, where adequate housing can be an enabler of social wellbeing.

CONCLUSION

TOWARDS GENDER-RESPONSIVE RETROFIT

While this study offers valuable exploratory insight, it is limited by its small, purposively selected sample and the subjective nature of qualitative analysis. Broader generalisability will require future quantitative research to validate these findings and strengthen the emerging framework.

The early phase of this study has highlighted the gendered dimensions of housing and retrofit, revealing how women's wellbeing is affected by the interplay of domestic responsibilities, economic constraints, ageing, and housing quality. Current retrofit strategies often fail to consider these lived realities, focusing instead on technical efficiency and energy metrics. Yet, for many women, decisions to move or upgrade are triggered by life events – employment changes, caregiving, health decline – highlighting the importance of responsive, flexible, and emotionally supportive environments.

By applying salutogenic principles to domestic retrofit and neighbourhood regeneration, interventions can be reframed not only to reduce emissions but also to promote health equity. A shift from carbon-focused metrics to human-centred outcomes would support

long-term wellbeing, particularly for women navigating unpaid care, economic hardship, and ageing (Antonovsky, 1987; Eriksson and Lindström, 2006).

Effective retrofit strategies must integrate gender-sensitive design, strengthen social connectedness, and support flexible economic participation. These are critical for promoting autonomy of decisions and fostering a strong sense of coherence (SOC), which contribute to resilience and subjective wellbeing (Vaandrager and Kennedy, 2022; Maslow, 1943; Diener, 1984). Future policy must move beyond technical solutions to embrace human-centric, place-based approaches that address the intersections of health, gender, and the built environment recognising psycho-social dimensions of human health.

REFERENCES

Alder, B., 1995. Psychology of Health. Applications of psychology for health professionals. Luxembourg: Harwood Academic Publishers GmbH.

Antonovsky, A., 1979. Health, stress and coping. San Francisco: Jossey-Bass.

Antonovsky, A., 1987. Unraveling the mystery of health: How people manage stress and stay well. San Francisco: Jossey-Bass.

Bahrs, O., et al., 2022. Salutogenesis and the Sense of Coherence in Middle Adulthood. In M. B. Mittelmark (Eds.) et. al., The Handbook of Salutogenesis. (2nd ed., pp. 167–183). Springer.

Baker, K., et al. 2025., Improving home energy efficiency - retrofit assessment review: policy report. Edinburgh: Scottish Government.

Bolton, E., et al. 2023. The relational dimensions of renovation: Implications for retrofit policy. Energy Research & Social Science, volume 96.

Bordass, B. & Leaman, A., 2010. Design for manageability. Building Research & Information. May 1. pp. 148-157.

Bordass, B., 2020. Metrics for energy performance in operation: the fallacy of single indicators. Buildings and Cities. 1. 260-276. 10.5334/bc.35.

Bowling, A. & Gabriel, Z., 2007. Lay theories of quality of life in older age. Ageing and Society, 27(6), pp.827–848.

Brett, M. & Macfarlane, L. 2022. Women, Work and Wealth in Scotland's changing economy 2022. [online] Scottish Women's Budget Group. Available from: https://www.swbg.org.uk/content/publications/Women-Work-Wealth-in-a-changing-economy-report.pdf [Accessed 25 July 2025].

CCC (Climate Change Committee), 2023. Progress in reducing emissions: 2023 Report to Parliament. [online] London: CCC. Available at: https://www.theccc.org.uk/publication/2023-progress-report-to-parliament/ [Accessed 24 Jul. 2025].

Cheng, A., et al., 2009. Hospital at home. Clinics in Geriatric Medicine Journal. Feb;25(1). pp.79-91

Cleland, C., et al., 2015. Home truths: Are housing-related events more important for residents' health compared with other life events? Housing Studies, 31(5), 495–518.

Deci, E.L. & Ryan, R.M., 1985. Intrinsic motivation and self-determination in human behavior. New York: Plenum.

Diener, E., 1984. Subjective Well-Being. Psychological Bulletin 95(3), pp.542–575.

Doyal, L. and Gough, I., 1991. A theory of human need. Basingstoke: Macmillan.

Easthope, H., 2004. A place called home. Housing, Theory and Society, 21(3), pp.128–138.

Eriksson, M. and Lindström, B., 2006. Antonovsky's sense of coherence scale and the relation with health: A systematic review. Journal of Epidemiology & Community Health, 60(5), pp.376–381.

Eriksson, M. and Lindström, B., 2007. Antonovsky's sense of coherence scale and the relation with quality of life: A systematic review. Journal of Epidemiology & Community Health, 61(11), pp.938–944.

Evans, G.W., et al., 2003. Housing and mental health: A review of the evidence and a methodological and conceptual critique. Journal of Social Issues, 59(3), pp.475–500.

Feijten, P., & Mulder, C. H., 2005. Life-course Experience and Housing Quality. Housing Studies, 20(4), pp.571–587.

Garrett, H., et al., 2021. The Cost of Poor Housing in England. BRE, Watford.

Garrett, H., et al., 2023. The Cost of Ignoring Poor Housing. BRE, Watford.

Gibson, J.J., 1979. The ecological approach to visual perception. Boston: Houghton Mifflin.

Golembiewski, J. A., 2022. Salutogenic Architecture. In M. B. Mittelmark (Eds.) et. al., The Handbook of Salutogenesis. (2nd ed.), pp. 259–274. Springer.

Golembiewski, J. A., 2023. Using ecological theory to manage behaviour and symptoms in people living with dementia: a transdisciplinary approach to design. Architectural Science Review, 66(5), pp.406–415.

Hong, A., et al., 2023., Age-Friendly Community Interventions for Health and Social Outcomes: A Scoping Review. International journal of environmental research and public health, 20(3), 2554.

International Monetary Fund (IMF), 2018. Pursuing Women's Economic Empowerment. [online] Available at:

https://www.imf.org/en/Publications/Policy-Papers/Issues/2018/05/31/pp053118pursuing-womens-economic-empowerment [Accessed 24 July 2025].

Kessler R. C., 2003. Epidemiology of women and depression. Journal of affective disorders. 74(1), pp. 5–13.

Koelen, M. & Eriksson, M., 2022. Older People, Sense of Coherence and Community. In M. B. Mittelmark (Eds.) et. al., The Handbook of Salutogenesis. (2nd ed.), pp. 185–199. Springer.

Lefebvre, H., 1991. The production of space. Oxford: Blackwell.

Luo, J., et al., 2023. Is Stress an Overlooked Risk Factor for Dementia? A Systematic Review from a Lifespan Developmental Perspective. Prevention Science. 24, pp.936–949.

Mallett, S., 2004. Understanding home: A critical review of the literature. The Sociological Review, 52(1), pp.62–89.

Marmot, M., 2010. Fair society, healthy lives: The Marmot Review. London: The Marmot Review.

Marmot, M., 2020. Health equity in England: The Marmot Review 10 years on. London: Institute of Health Equity.

Maslow, A.H., 1943. A theory of human motivation. Psychological Review, 50(4), pp.370–396.

Mielke, M.M., 2018. Sex and Gender Differences in Alzheimer's Disease Dementia. Psychiatry Times. Nov, 35(11), pp.14-17.

Pinquart, M. and Sörensen, S., 2006. Gender differences in caregiver stressors, social resources, and health: An updated meta-analysis. The Journals of Gerontology. 61(1), pp.33–45.

Plagnol, A.C. & Scott, J., 2011. What Matters for Well-Being: Individual Perceptions of Quality of Life Before and After Important Life Events. Applied Research Quality Life 6, pp.115–137.

Public Health Scotland, 2021. Healthy housing for Scotland: a briefing paper setting out the fundamental link between housing and public health. Edinburgh: Public Health Scotland.

Paykel, E. S., 1991. Depression in Women. British Journal of Psychiatry. 158(S10); pp.22-29

Reid, K., et al., 2005., Exploring lived Experience. The Psychologist. 18. 18-23.

Santos Silva, M. & Klasen, S. (2021). Gender inequality as a barrier to economic growth: a review of the theoretical literature. The Review of Economics of the Household 19, pp. 581–614.

Scottish Government, 2020. Scotland's People Annual Report 2019. [online] Available at:

https://www.gov.scot/binaries/content/documents/govscot/publications/statistics/2020/09/scottish-household-survey-2019-annual-report/documents/scotlands-people-annual-report-2019/scotlands-people-annual-report-2019/govscot%3Adocument/scotlands-people-annual-report-2019.pdf [Accessed 25 July 2025].

Scottish Government, 2021. Tackling fuel poverty in Scotland: a strategic approach. [online] Available at: https://www.gov.scot/publications/tackling-fuel-poverty-scotland-strategic-approach/ [Accessed 25 July 2025].

Shelter Scotland, 2024., Gender and the Housing Emergency. [online] Available at: https://assets.ctfassets.net/6sqqfrl11sfj/4ZLW5HGD81XNkUs2G8gqF/795576002afa52c58e883f0198b865b0/Shelter_Scotland_and_Engender_Report.pdf [Accessed: 25 July 2025].

Smith, J.A., et al., 2009. Interpretative phenomenological analysis: Theory, method and research. London: Sage.

Somerville, P., 1997. The social construction of home. Journal of Architectural and Planning Research. Autumn,14(3), pp. 226-245

Stansfield, J. & Bell, R., 2019. Applying a psychosocial pathways model to improving mental health and reducing health inequalities: Practical approaches. International Journal of Social Psychiatry. Mar;65(2), pp.107-113.

Stuart, K. E., et al., 2020. A Systematic Review of the Association Between Psychological Stress and Dementia Risk in Humans. Journal of Alzheimer's Disease. 78(1); pp.335-352.

UN Women, 2020. Gender equality: Women's rights in review 25 years after Beijing. [online] Available at: https://digitallibrary.un.org/record/3855128?v=pdf [Accessed 24 July 2025].

UN Women, 2024. Progress on the Sustainable Development Goals: Gender snapshot 2024. [online] Available at: https://www.unwomen.org/en/digital-library/publications/2024/09/progress-on-the-sustainable-development-goals-the-gender-snapshot-2024 [Accessed 24 July 2025].

Vaandrager, L. & Kennedy, L., 2022. The Application of Salutogenesis in Communities and Neighborhoods. In M. B. Mittelmark (Eds.) et. al., The Handbook of Salutogenesis. (2nd ed., pp. 349–359). Springer.

Vásquez-Vera, C., et al., 2023., Gender-based differences in the meanings and uses of housing for health and everyday life: An intersectional approach. Women's Studies International Forum. Volume 99, 10276.

WHO (World Health Organization), 2023. Depression: Key facts. [online] Available at: https://www.who.int/news-room/fact-sheets/detail/depression [Accessed 24 July 2025].

WHO (World Health Organization), 2017. Global action plan on the public health response to dementia 2017 - 2025 [online] Available at: https://www.who.int/publications/i/item/global-action-plan-on-the-public-health-response-to-dementia-2017---2025 [Accessed 24 July 2025].

WHO (World Health Organization), 2015. World report on ageing and health. [online] Available at: https://www.who.int/publications/i/item/9789241565042/ [Accessed 24 July 2025].

Zavaleta, D., et al., 2017. Social isolation: A conceptual and measurement proposal. Social Indicators Research., 131, pp.367–391.

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Pareisse project led the industry development of the Inclusive Design Overlay to the RIBA Plan of Work and is a member of the International Association of Accessibility Professionals, Access Association UK, and Neurodiversity in Planning. She is currently leading the accessibility and inclusive design advisory discipline at global engineering firm, Mott MacDonald.

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4

EMBEDDING INCLUSIVE DESIGN INTO PROJECTS: THE IMPACT OF THE INCLUSIVE DESIGN OVERLAY TO THE RIBA PLAN OF WORK

By:

Pareisse Wilson

INTRODUCTION

The design of our built environment and infrastructure has a powerful influence on the quality of people's lives. All such designs can either embrace, connect people, and foster a sense of belonging or restrict people with design failures that create boundaries, barriers, safety risks and feelings of insecurity.

As designers, we have an incredible opportunity and weighty responsibility to create built-environments that truly welcome everyone, regardless of their characteristics or identity, such as: age, disability, gender, neurodiversity, sex, health conditions, race, ethnicity, religion or belief, pregnancy, maternity or paternity status, carer status, and more. By intentionally weaving inclusive design into project delivery, stakeholders, design teams, and contractors can create spaces that celebrate the diversity of humankind.

WHAT IS THE INCLUSIVE DESIGN OVERLAY TO THE RIBA PLAN OF WORK?

The Inclusive Design Overlay to the RIBA Plan of Work (RIBA IDO) provides a robust framework that helps stakeholders integrate inclusive design at every stage of a project, and celebrated its 2-year anniversary of publication in July 2025.

This guidance is the first of its kind to define the key activities that different built-environment practitioners can take to embed inclusive design good practice activities, principles and standards into the design and construction project RIBA Work Stages These stages are set out in the Royal Institute of British Architects Plan of Work Stages and followed by the majority built-environment professionals in the UK (see RIBA Plan of Work).

The Inclusive Design Overlay was developed over three years through research and workshops with input from over 100 professionals representing technical expertise from across 25 built-environment professions; from architects, to engineers, project managers, access and inclusive design consultants, asset managers and more, and is the first industry-coordinated technical framework for delivering inclusive design.

The guidance sets out how different project roles can play their part in delivering these activities and includes:

- **Client (commissioning entity for a project)**

- **Project Management Team (part of the Client Team, the Project Management Team is generally involved with the overall planning and coordination of a project from inception to completion, enabling completion on time, within cost and to required quality and inclusion standards. This can include a project manager, cost consultants, contract administrators, information managers etc.)**
- **Design Team (is responsible for the design of the building, for producing the information required to manufacture and construct it. Anyone who designs, engineers or contributes advice or information will be used as part of the design process and needs to be in the Design Team).**
- **Construction Team (The contractor is the organisation traditionally responsible for the construction of the development. The Construction Team is responsible for manufacturing, assembling, or constructing a building, including the logistics and contractual relationships connected with this.**
- **Asset Management Team (The Asset Management Team, also known as the Facilities Management Team, are responsible for developing, operating, maintaining, upgrading and disposing of an asset using the most effective and efficient means).**

These activities are supported by a technical Inclusive Design Lead or Inclusion Champion.

- **Inclusive Design Lead (The Inclusive Design Consultant will typically facilitate the effective implementation of inclusive design in partnership with the wider Project Team. They will become part of the Design Team and are required to ensure**

environments are designed to be accessible and usable for all people, regardless of their abilities, disabilities, gender, faith, and other protected characteristics).

- **Inclusion Champion (It is recognised that on smaller-sized projects, an Inclusion Champion might be better suited to the project budget, and can be identified from within the Client, Design Team or any of the wider project roles. The Inclusion Champion will then take on responsibility for raising standards for diversity, access, and inclusion throughout the project).**

Together, these roles comprise the Project Team.

WHAT DOES THIS LOOK LIKE IN PRACTICE?

From the outset, for instance, the client can be involved at RIBA Work Stages 0 to 1, defining their inclusive design vision and desired outcomes in the Project Brief, and Inclusive Design Strategy. They can set aside a dedicated budget to deliver dedicated inclusive design activities and, in partnership with the Project Management Team, appoint an Inclusive Design Lead.

Working with the Inclusive Design Lead, the Client can undertake an equality impact assessment and an inclusive design audit to understand the potential impacts of the project on people and communities (such as the protected characteristics listed under the

Equality Act 2010 and beyond, such as neurodiversity) and mobilise a lived-experience user group for regular engagement.

The Project Team engages regularly with lived experience user groups throughout Stages 2-6, testing and co-creating their designs throughout the project lifecycle.

The Design Team and Construction Team in Stage 5 can work together alongside the Inclusive Design Lead to conduct an inclusive design audit of the environment, ensuring the environment is accessible for both end users and their teams on site, as planned.

At Work Stages 5 to 7, the Asset Management Team can develop the Building Manuals and Post Occupancy Evaluation Surveys with contributions from across the Project Team to capture the building accessibility and inclusion arrangements and features, and to gather feedback on it's success.

A review at the end of each stage allows different team members to report back to the Client on how the aims of the Inclusive Design Strategy have been addressed. This is known as the Inclusive Design Outcome Review.

WHAT ARE SOME OF THE BENEFITS OF USING THE OVERLAY?

Inclusivity and accessibility should be fundamental aspects of good design, and it raises the bar by encouraging Project Teams to think

about inclusive design beyond application of minimum standards such as Building Regulations, to applying inclusive design best-practice standards and guidance informed by lived experience, research, and expertise. Applying inclusive design thinking as a practice in the spirit of the RIBA Inclusion Charter, which calls for a commitment to "embedding inclusive design in all projects, contributing to the development of inclusive environments" (Action No.5 Royal Institute of British Architects, Inclusion Charter).

The inclusive design overlay puts people at the centre of the project. It brings together every Project Role to think intentionally about the project impact and design needs on the people designing, using and maintaining it.

It encourages Project Teams to integrate inclusive design as a core part of a project, in the same way we might for sustainability, health, and safety. No longer delivered in silo or as an add-on, but woven into the fabric of the project to create a good design process and positive social outcomes.

For clients, inclusive design can lead to measurably higher levels of user satisfaction and reduce the likelihood of costly adjustments post-completion.

For contractors and asset managers, adopting these principles early can streamline construction phases and prepare facilities teams with key information for incorporation into the Building Manual by pre-

empting issues related to accessibility and usability and identifying opportunities to mitigate the barriers.

For architects, the Overlay offers a structured approach to creating resilient, inclusive environments that anticipate the needs of a broader user base, emphasising when to use inclusive design, technical experts and consulting lived-experience user groups throughout.

WHERE ARE WE NOW?

The event marking two years since the launch of the RIBA Inclusive Design Overlay was held in July 2025 and brought together hundreds of built-environment professionals and practitioners at the conference held at the Institution of Civil Engineers and online.

The event was formed around two panel discussions focused on the implementation and impact of the inclusive design overlay in the wider built environment, and the case studies of the Inclusive Design Overlay in action. From clients, architects, developers, and inclusive design and accessibility experts, we have learned how the overlay has already played an essential role in creating inclusive designs and spaces and influencing industry change.

We heard from clients such as Transport for London, Heathrow Airport, University College London, Enfield Council, East West Rail talking about what they are doing to drive inclusive design excellence in practice and on projects. We learnt about their own

application of the inclusive design overlay guidance into their organisational ways of working, adding requirements to apply the Inclusive Design Overlay into their procurement process and project delivery. We heard from design teams and asset managers on the benefits and importance of having inclusive design specialists involved throughout the project lifecycle and much more. We reflected on how everyone can and should have a part to play in shaping inclusive and accessible environments, and the importance of bringing all team members and practitioners to the table equitably to deliver this.

WHERE ARE WE GOING?

The Conference was developed by RIBA with the support of myself and the UK Built Environment Inclusive (B.E) Group represented by eight leading professional bodies, including the Chartered Institute of Building, the Institution of Civil Engineers, The Landscape Institute, Royal Institute of British Architects, Royal Institution of Chartered Surveyors, and the Royal Town Planning Institute, The Chartered Institute of Architectural Technologists (CIAT) and The Chartered Institution of Civil Engineering Surveyors (CICES). This group has formed a collective commitment to advancing equity, diversity, and inclusion (EDI) with all CEO's and Diversity and Inclusion Leaders of these organisations signing a new five-year memorandum of understanding.

The Diversity and Inclusion Directors and CEO's of the B.E Inclusive Group chaired roundtable discussions in-between the panels with in-

person attendees at the event, asking questions such as 'What have you done, or seen, to promote the Inclusive Design Overlay?', 'What can be done to get more buy-in from clients and delivery teams at earlier stages?', 'What lessons learned can you share?', 'What could the industry do to promote this guidance as good practice?'

The ideas discussed have been taken away by the B.E. Inclusive Group to facilitate further industry-wide adoption of the inclusive design overlay and to identify opportunities to do more together to advance accessibility and inclusion in the built environment. Attendees left with personal and collective commitments to do the same.

To help the built-environment industry globally, the RIBA is capturing the case studies of projects that have applied the overlay and will be presenting these on RIBA's website, architecture.com, in the very near future for anyone to learn from, apply and ask questions about.

For me, as a project that started out as an idea in 2019 with a key steering group member, Jenny McLaughlin from Heathrow, I couldn't be more excited and proud of what we, with the help of the industry, have achieved to create a guidance that has enabled us all to think about inclusive and accessible design as a fundamental part of shaping sustainable and resilient environments, but also as a joyful responsibility we have the privilege to deliver, together.

You can download the Inclusive Design Overlay to the RIBA Plan of Workhere, and submit any case studies you have, here.

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Becca Thomas is creative and founding director of New Practice, part of Civic, the team of system thinkers in the built environment. Becca leads on the delivery of transformational placemaking, community engagement and enlivenment strategies for both public and private clients.

Notably, Becca was lead architect on the £2.7 million redevelopment of the Kinning Park Complex building in Glasgow on behalf of Kinning Park Complex SCIO and continues her commitment to community-led regeneration at Cumberland Street Station.

Her work includes delivering complex built projects at a wide range of scales - from pavilions and public realm works, to renovations, creative workspaces, cultural and community buildings and arts hubs.

In 2019, Becca was appointed to the Glasgow Urban Design Panel where she provides constructive advice to development, design teams and planners, as part of the pre-application consultation process. In 2021, Becca was made a Trustee of the Royal Incorporation of Architects in Scotland (RIAS), and a Glasgow Institute of Architects (GIA) Council Member.

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INCLUSIVE DESIGN, A COLLECTIVE ACT

By: Becca Thomas

INCLUSIVE DESIGN TEAMS MAKE INCLUSIVE DESIGN OUTCOMES.

It's a phrase we repeat often, because it's not just a nice idea, it's a provable truth. And yet, so many in our built environment profession are still trying to achieve inclusive outcomes from within exclusive systems, designing *for* communities they don't reflect, rather than designing *with* and *within* them.

Inclusive design is not a checklist. It's not a flowchart. It's not a ramp or a lift added to an otherwise inaccessible design. It's a mindset: messy, collaborative, political, human. This mindset is empathetic. It demands compromise and welcomes disagreement. It requires real humility: acknowledging what we don't know, setting aside ego, and actively making space for views that challenge our own to the benefit of our projects, our clients and ultimately our cities.

It is important to be honest and say that we're not always successful in doing so, and that it is almost never easy to do 'inclusive design' right.

DESIGNING WITH, NOT FOR

We are continually learning and adapting our approach. Since the beginning of our practice, we have learnt a great deal about adaptive ways of working with differing communities and their specific needs. At its best, inclusive design reflects the diversity of the people it's for. That starts with the diversity of the people who make it.

One of the core truths I've learned is that inclusive design doesn't have one right answer, but it has many wrong ones. Designing only for a single identity group - no matter how well-intentioned - while excluding others is not inclusion. Ignoring the quiet voices in the consultation room is not inclusion. Assuming you already understand the needs of someone else is not inclusion.

At New Practice, part of Civic, we build places by building relationships. True accessibility and inclusion come from collective understanding: from the client, the design team, and, critically, from within communities. That means listening actively, iterating often, and remaining open to being wrong. It means putting lived experience at the centre.

I've understood that this takes relentless effort.

It takes a genuine willingness to engage and listen.

It takes not being afraid to stand up for what you believe in. And lastly, it takes being vulnerable.

Our work in public space constantly reveals these tensions. In certain instances, active travel can, for example, offer freedom and safety for some; whilst simultaneously creating barriers for others. The infamous 'floating bus stop' debate reflects this exactly: what's intuitive and elegant for one user group becomes unsafe or exclusionary for another. So, we balance. We compromise. We educate. We co-design.

Because inclusive design is balance.

BEYOND THE RAMP

There's often a temptation to treat accessibility as a spatial problem with a spatial solution: add a ramp, widen a door, drop a kerb, add an accessible toilet. These are important, of course, and they are relatively easy fixes. However, alone, they are not enough.

True inclusive design broadens the field of vision. It accounts for hidden disabilities, for sensory and cognitive access needs, for cultural contexts, for life experiences that don't fit neatly into standard codes. It invites us to ask: who is not here? Who is not visible? Who is made invisible by our assumptions?

Inclusion is not just about disability. It's about the full spectrum of identity: race, class, gender, queerness, age, language, faith, immigration status, and more. It's about building places where *everyone* can see themselves and be seen. It's about creating connection.

THE POLITICS OF REPRESENTATION

This work is political, by which I don't mean party politics, but people politics. Who gets heard? Who gets space? Whose needs are prioritised? These are questions of power.Architecture and the build environment is political. The choice of who we work for, who we design with, and who we hire is political. Our studio cultures are political. And we are proudly, unapologetically political.

When I say to others in the industry that I work for a woman, LGBTQ+ and disability-led practice, I believe that this is a political statement in itself. At New Practice, part of Civic, we've been women-, disability- and LGBTQIA+-led since the beginning. That shouldn't be remarkable, but it still is. We work in an industry that remains overwhelmingly white, male, and middle class at leadership levels. And that has consequences. It shapes who buildings are for. Who they exclude. Whose safety is considered. Whose joy is prioritised.

We are different, and we use that difference to make better work. We bring lived experience of queerness, disability, migration, gender, and economic diversity into conversations that often lack it.

We design from the margins, because we live there, and that gives us a powerful perspective. We know what it's like to be designed out. A recent focus in the built environment towards making spaces for 'women and girls' is welcomed, and begins to fix one of the many gaps in the making of our places.

We speak openly about who leads our practice because visibility matters. Too many young people entering built environment professions still don't see themselves represented. I remember how isolating that felt. I still feel it sometimes. But we are trying to be the kind of workplace, across the whole Civic team, that we needed when we were starting out. Making sure representation goes further than a shiny team photo, it's about making clear that all voices are valued and welcomed into decision-making, in briefing, in authorship.

WHO GETS TO DESIGN?

The industry talks a lot about diversity, but less about power. Too often, practices tick boxes or hire "diverse" staff without shifting how decisions get made or who has influence.

Inclusive design isn't about tokenism. It's about equity: sharing authorship, credit, and opportunity. It's about knowing when your voice isn't needed and stepping back. It's about recognising that good design comes from deep listening, not from inside your head.

If your team reflects the world outside your window, if it includes disabled people, trans people, people of colour, immigrants, parents, neurodivergent folks, queer people, *and* the "everyman", then your design will be richer. More layered. More useful. More loved. And if your team doesn't reflect your community, you need to work harder. Build relationships. Hire differently. Commission differently. Fund differently. Support educators to get young people into and through education in the first place.

DESIGNING WITH FEMINISM AND CARE

One of the projects we, as a practice, are most proud of is the redevelopment of Kinning Park Complex (KPC). It's a building, yes, but it's also a feminist legacy. Saved by local mothers in the 90s, sustained by community activism, and reimagined by a team rooted in care and representation.

KPC wasn't briefed in the usual way. No neat bullet points or formal business cases. Instead, we began with a mind-map: messy, joyful, full of contradictions. Through dialogue, it became a brief organised around themes of Accessibility, Identity, Creativity, Flexibility, and Community. And that shaped the outcome. Where others might have expanded, we worked with what was there. We added a new Quiet Space for prayer, breastfeeding, neurodiverse users: whatever people needed. We kept the building colourful, building a new - intentional - bold palette as part of our access and wayfinding strategy. We reopened the twin staircases to improve visibility and security. We designed with dignity.

KPC isn't about architectural spectacle. It is about listening. It is about trust. And it has redeveloped a building and a place that people feel is *theirs*. That's inclusive design.

BUILDING KNOWLEDGE = SHARING POWER

From our work with KPC came another project we're deeply proud of: A Building for Your Community. It's a free resource, born out of our own conversations, missteps, and learnings. It exists to support communities, especially those without technical expertise, to become confident clients, to shape their own built environments, and to ask the right questions.

This is what inclusive design means to us: knowledge sharing as activism. Opening doors. Naming systems. Naming ourselves.

So far, the series includes two guides: *Community-Led Development in Scotland* and *Making Accessible Places.* We hope it becomes a library. A starting point. A tool for solidarity.

THE WORK IS NEVER DONE

We won't always get it right. That's part of the process. But we keep trying. We challenge the status quo, not just in our drawings, but in our team structures, our language, our workflows.

Books like *Invisible Women* remind us that when women are left out of design, they are actively put at risk. We've seen this in everything from city lighting strategies to bus routes to toilet provision. When data is "gender-neutral," it defaults to male. When decision-making rooms are homogeneous, bias becomes policy.

Design, therefore, must be intersectional.Because cities aren't neutral. Placemaking, architecture and engineering aren't neutral. Data isn't neutral. *We* aren't neutral. And so, we must design accordingly.

I'll end where I began:

- **Inclusive design teams make for better buildings.**
- **Inclusive design teams make better places.**
- **Inclusive design teams make better policies.**

Inclusive design is not a luxury. It is not an optional add-on. It is foundational.

It is feminist, it is queer, it is political, and it is possible. It takes relentless effort. It takes listening. It takes standing up. And it takes being vulnerable.

When we build inclusively, we build with hope. We build with care. We build a future that belongs to *everyone*.

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Letter from the Chairman's Desk

By Sunil Bhatia PhD

In the absence of tools, our primitive ancestors were unable to kill animals for food and lived in constant fear of becoming prey to stronger creatures. However, they were capable of stealing animals' eggs for survival. Their food gathering depended mainly on physical strength, as their minds had not yet developed tactful reasoning due to limited knowledge.

Over time, knowledge and technology advanced. Today, it is evident that our lives are completely dependent on technology. That early act of stealing eggs was largely physical, with only minimal mental effort involved in deciding when to act. The theft of eggs was among the first human strategies for obtaining food, and interestingly, the consumption of eggs continues to this day.

The journey from eating raw eggs (before fire management) to boiling and frying them is fascinating. I believe the primitive habit of stealing is still present in so-called modern humans, as eggs remain a preferred part of our diets. Initially, humans had no knowledge of fire and were left with no choice but to eat raw yolks. Today, eating raw eggs is socially embarrassing because of the foul smell it leaves on the breath. To avoid this, people boil, half-fry, or fully fry eggs, which reduces their natural scent. Yet the craving for raw eggs persists. To manage this contradiction, humans invented the

"poached egg"—a preparation that retains the flavor of rawness while appearing socially acceptable.

Cooking techniques evolved alongside human discovery. Our ancestors developed three fundamental methods: roasting, boiling, and frying. Boiling and roasting occur naturally in the environment—requiring only sharp observation to imitate. Frying, however, is a wholly man-made technique, perfected through fire management and the extraction of oils from seeds. In Indian culture, a fried meal is called *pakka khana*, valued for its better shelf life. Roasting itself has two forms: direct (placing food in flames) and indirect (using an intermediate such as a metal plate).

Domestication of animals followed similar principles of adaptation and design. Some animals, like horses, survived mainly due to speed, but their growing hooves caused pain and reduced competitiveness unless trimmed by humans. Sheep, left unshorn, become immobilized under the weight of their wool, sometimes even losing vision. Humans, with their tools, provided shearing, hoof-trimming, and other care, and in exchange, animals surrendered themselves to human control.

Early humans also exploited animals' instincts and emotions. They trapped them using cleverly designed pits covered with weak platforms and baited with food. Once trapped, the animals were either killed for meat or spared for domestication. This gave rise to new challenges: providing a natural environment for animals while still controlling them. Humans developed techniques such as tying animals with ropes and pegs, using collars for protection (every predator attacks the prey for instant killing by breaking neck and dog color was protected with metal strip with upward nails in it and

allow him to walk around in natural environment), or restricting movement with wooden planks or tying front both legs with lose rope . Design of fence allows the animal walk around with protection with no physical restriction.

The idea of "survival of the fittest" does not always hold true. Often, survival is a matter of design and chance. In group escapes, the weakest or most unlucky animal is sacrificed to predators, not necessarily the least capable. Similarly, sperm competition in reproduction is governed more by chance than by strength, making survival a design accident rather than proof of superiority. I call this phenomenon "design victimhood."

I was a student in college, and there was a school nearby. The school was unique in the sense that more than fifty boys of different grades had formed a group. If they found anyone—no matter how strong—who spoke foul language, behaved badly, or insulted even one member of their group, they would attack together. Their first move was always to make the person fall to the ground. Once he was down, all the boys would beat him until he was half-dead. Witnessing such scenes, others never dared to act against this group. I observed that even the mightiest person could be punished by a group of students aged only 8 to 14. Such a strong man, I called a "designed victim."

I realized while plucking fruit from a tree that many factors were at play, with me as the predator and the fruit as the prey. This has little to do with the idea of "the survival of the fittest." Instead, it depends on my craving, the intensity of my hunger, and the resources available. Craving is influenced by hormones, and my

preferences have been shaped by past experiences. I do not always pick the weakest or the best fruit—I choose according to my taste.

For example, one person may prefer a small raw mango for its sour, slightly bitter taste. I, on the other hand, prefer one that is close to ripe—tangy, still somewhat green, but beginning to sweeten. Others may like the fully ripe, yellow mango with its rich sweetness.

In the same way that humans decide what to consume, I believe other predators also think about their prey. An alligator does not live in the water considering who is the "fittest"; it simply preys on whatever is within reach. Whoever comes to the water to quench their thirst may become the victim. Whether the alligator succeeds or fails in its attempt is another matter.

There are too many "ifs and buts" for anyone to confidently say that only the fittest survive. The prey's death merely proves the predator's success. I call this the "Victim of Design," which is a broader concept than "survival of the fittest." The latter is only partially true and cannot be applied in all circumstances.

Design shapes outcomes in other ways too. Machines, for example, may be overburdened beyond capacity or underutilized. Likewise, in predator attacks, the most capable animal may die simply because of positioning within the group. Predators themselves rarely seek the strongest prey; instead, they kill the first easy target and are satisfied.

Even in the animal kingdom, strategies show that survival is about design, not strength. In some wolf packs, the old and experienced lead, the strong fighters follow, then females, and finally the wildest at the rear. This design protects the group more effectively than

individual strength could. Animals live not out of hatred but out of strategies for longevity.

Plants too reveal this principle. As one renowned botanist explained, tomato plants turn their leaves sour when attacked by caterpillars. If the predator persists, the leaves communicate to other leaves to turn sour. If it fails, collectively releases scents to attract parasitic insects, which lay eggs inside the caterpillars. This is not survival of the fittest, but survival through improved design over millions of years.

This special issue Guest Editor Jessica Noel- Smith has done great jutice to her role and invited authors those are great contributors in field of design and she added a new dimension to our international publication.

Enjoy reading.

With Regards

Dr. Sunil Bhatia

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Forthcoming Issues

Year 2025 declared as Women's Designer

October 2025 Vol-20 No-10 (250th issue)

Dr Dolly Daou

Dr Dolly is an internationally recognised design researcher, educator, and leader. She founded the DRS Food Design Research Studio and the Cumulus Food Think Tank. With 25+ years of global experience, numerous high ranking academic publications, she has received multiple awards and serves on the Advisory Board of Cindrebay University, Dubai.

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November 2025 Vol-20 No-11

Josyane FRANC

JF- International Design Networks Expert, independent consultant,

Knight of French National Order of Merit / Chevalier de l'Ordre National du Mérite de France

Ms. Josyane Franc is an international expert with over 35 years of experience in the field of international cultural relations, art and design project conception, management and coordination, co-curating exhibitions, jury design competitions, mentor etc. She is a Design networks Expert and independent consultant since 2019 involved in European and international projects. In 2021, for her career and commitment to culture with outstanding contributions, she was awarded Chevalier de l'Ordre National du Mérite /Knight of the National Order of Merit, one the highest French National civilian awards.

Her career includes the roles of Director of international affairs for the Cité du Design and Saint-Etienne School of Art and Design (ESADSE)- France 1989-2019, member of the founding committee of the Biennale Internationale Design Saint-Étienne in 1998 till 2019, Human Cities Challenging the city scale leader 2014-2018 and focal point for Saint-Etienne UNESCO creative city of design 2010-2019.

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December 2025 Vol-20 No-12

Jani Nayar

She found it in the Society for Accessible Travel & Hospitality (SATH), an organization dedicated to making the world more welcoming for travelers with disabilities. Since 2024, the name was changed to Society for Accessible Tourism& Hospitality, keeping the acronym SATH.

What began as a role in tour operations quickly grew into a deep, lifelong commitment. Jani served as SATH's Executive Coordinator before becoming its Executive Director, a role in which she now serves as the organization's voice, advocate, and bridge between communities, governments, and industry leaders. Her mission: to ensure that travel is a right, not a privilege, for people of all abilities.

Her work has taken her to some of the world's most significant platforms for accessible travel. She has spoken and led workshops at events including the World Summit Destinations for All in Montreal, the Adventure Travel World Summit, the Africa Travel Association, the New York Travel Show, the Caribbean Tourism Conference, the Abilities Expo, the World Congress on Disabilities, the International Institute on Peace through Tourism, the Adventure Tour Operators' Association of India, SATTE in India, ReaTech and the World Tourism Forum in Brazil, and the First Symposium on Accessible Tourism in Ecuador—among many others.

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New Books

https://www.morebooks.shop/shop-ui/shop/book-launch-offer/74414a1df61c3d2ea8bf46ae7e3c0cf31769f261

it is available on www.morebooks.de one of the largest online bookstores. Here's the link to it: https://www.morebooks.de/store/gb/book/design-for-all/isbn/978-613-9-83306-1

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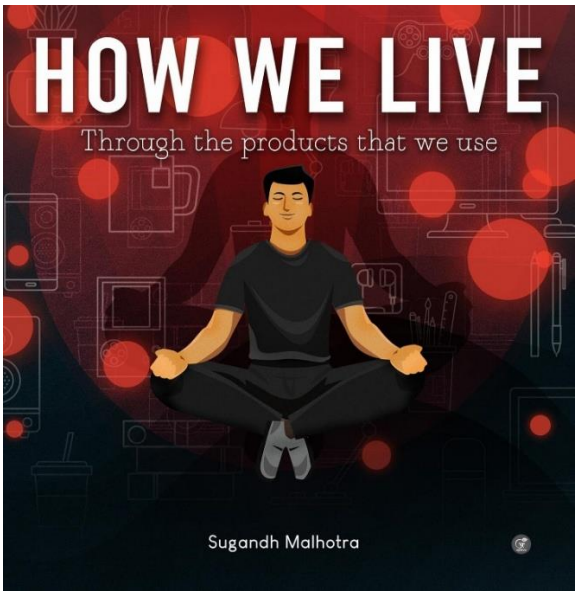
HOW WE LIVE: Through the Products that We Use

Authored by : Sugandh Malhotra,

Professor, IDC School of Design, IIT Bombay (INDIA)

Sugandh(at)iitb.ac.in



Products tell stories about their users, their likes, tastes and journeys. 'How We Live' book aims to outlay, document and study the used products and create a persona of the users through a brief narrative. This visual documentation book is an excellent resource to observe and acknowledge the subtle differences in choices that are driven by nuances other than personal preferences.

Available at: Amazon.in, Amazon.com, Astitva Prakashan

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MOVE MUMBAI: Kaali Peeli and Beyond

Authored by : Vivek Kant, Sugandh Malhotra, Angshuman Das, Tekhenutso Theriah

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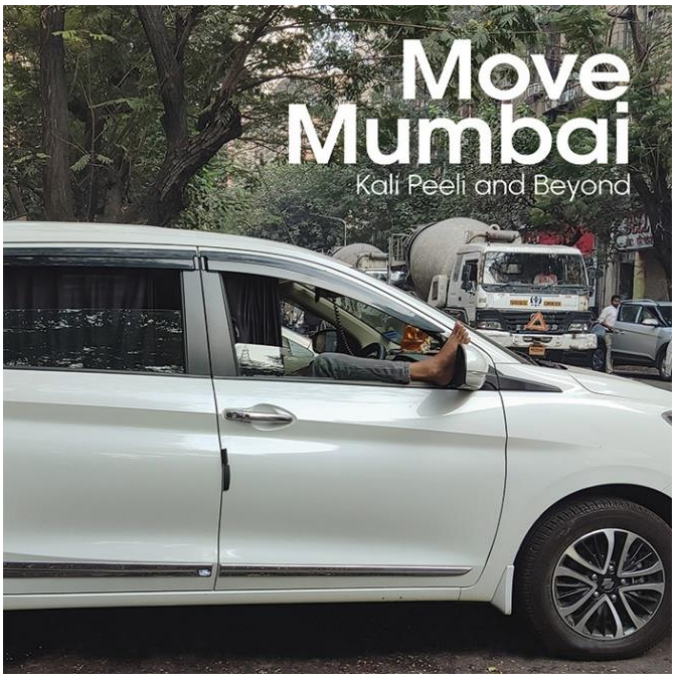
Sugandh(at)iitb.ac.in



Move Mumbai" is an incredulous yet everyday traffic story from the streets of Mumbai captured through a series of photographs. We closely observe how Mumbaikars use their vehicles, and live with and around them. From cab drivers to bus passengers, from goods carriers to bikers, to children, and pedestrians, Mumbaikars encounter hundreds of vehicles daily while commuting between any two places whether they may or may not be in one themselves. While a two-wheeler motorbike is designed to carry two people. Mumbaikars still manage to fit multiple, especially younger children, in ways that a designer would typically not envision. This reflects in certain ways the economic constraints faced by many Indian families, the cultural value placed on integrated family living, and their resourcefulness. This is one of the many ways in which the city dwellers have appropriated vehicles. We hope that the readers relook at these everyday images with a new pair of eyes to understand the seemingly mundane yet incredulous images of the mobility of Mumbaikars.

Available at: Amazon.in, Amazon.com, Astitva Prakashan

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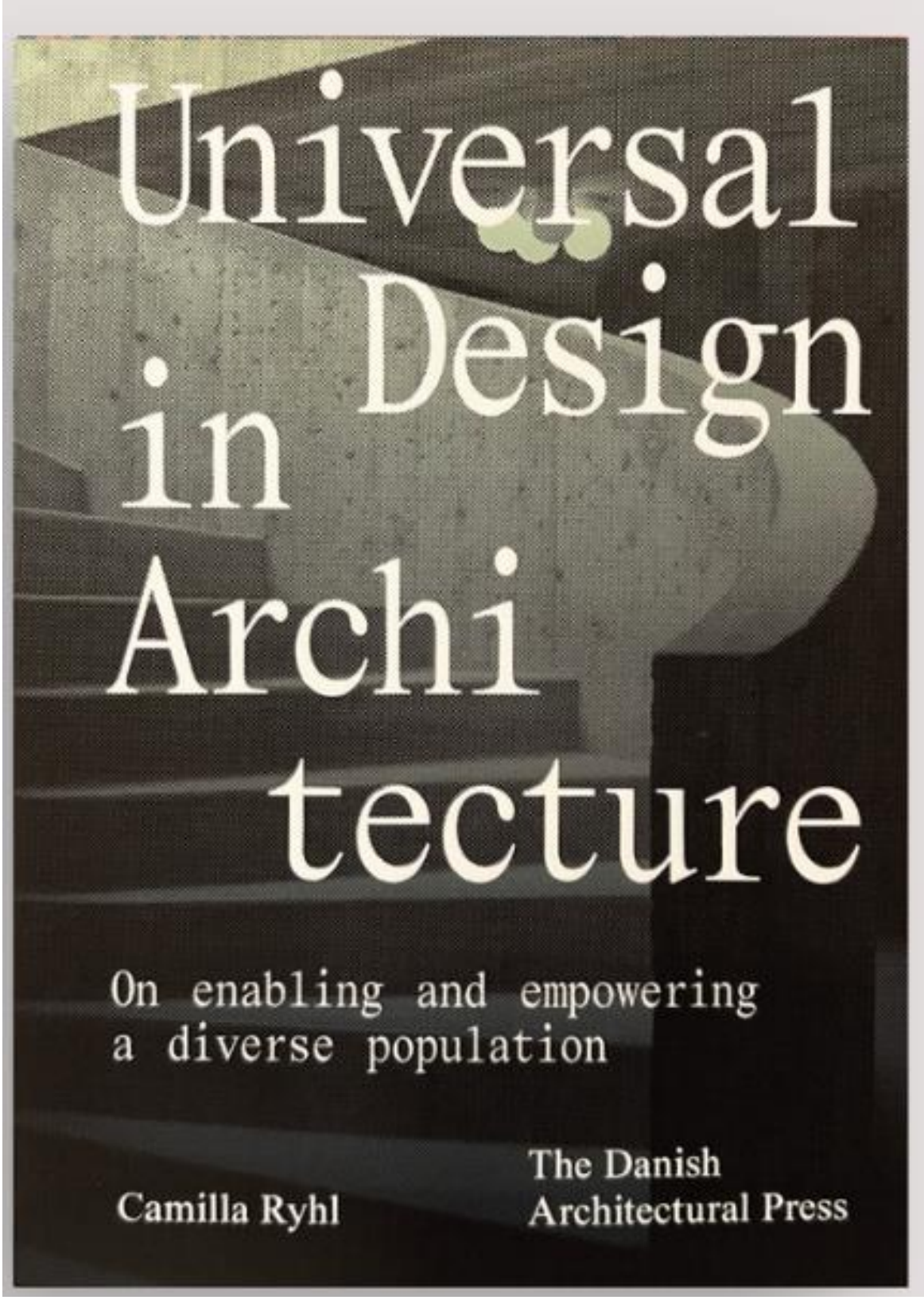

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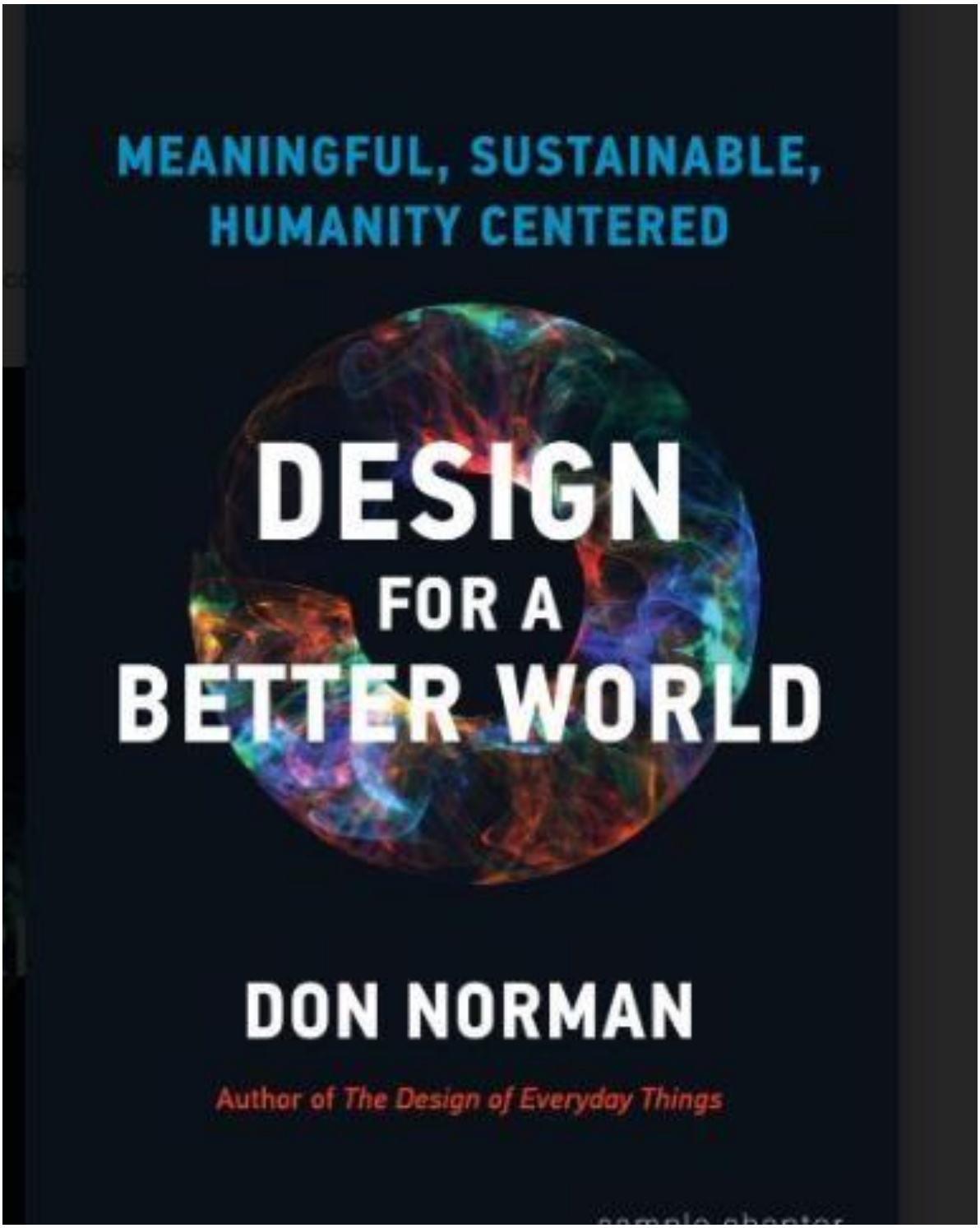

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Emilio Rossi (Editor)

Innovation Design for Social Inclusion and Sustainability

Design Cultures and Creative Practices for Urban Natural Heritage

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First International Conference on Building Engineering and Management (ICBEM 2025)

Center for Human Centric Research @ SPA Bhopal

Invites **original research papers, case studies, and technical reports** under Theme-2 :

Sustainable Design and Construction Practices ; Accessibility and Universal Design

Coordinated by-

Center for Human Centric Research (CHCR)

Session Coordinators-

1. Prof. Rachna Khare.
2. Dr. Parama Mitra.
3. Dr. Kakoli Roy

Important Dates

April 10, 2025	April 15,2025	June 30,2025	Nov 3 & 4,2025
Abstract Submission	Acceptance Notification	Final Paper Submission	Conference Date

Join us for a chance to network, collaborate, and contribute to the future of building engineering and management!

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News

1 National MS Society awards top student projects in 'Universal Design For Inclusion Programme'

The National Multiple Sclerosis Society (NMSS) has announced the three winning projects of the inaugural edition of the Universal Design for Inclusion Programme.

The inaugural cycle brought together over 80 students who worked in teams to submit more than 30 design projects that tackled challenges in three focus areas: cognitive, communication, and mobility, where people living with multiple

sclerosis and other chronic conditions often face limitations in daily life.

In the Cognitive category, the winning project was Lexy, an AI-powered tool developed by students at the Higher Colleges of Technology in Sharjah that simplifies complex text and tracks clarity in real time. With Arabic language support, the tool offers valuable assistance to people living with conditions that affect memory and concentration.

In Communication, the winning innovation was Ni'mah, a discreet smart bracelet developed by students at the University of Sharjah. The bracelet translates emergency sounds into light and vibration alerts, helping individuals with hearing impairments respond quickly in critical situations.

In the Mobility category, VersaGrip was selected as the winning project. Developed by students at the Dubai Institute of Design and Innovation (DIDI), the AI-powered assistive grip device draws inspiration from Emirati jewelry, blending cultural identity with functionality and reducing stigma around assistive technology.

The programme was delivered in partnership with six leading UAE universities across 11 campuses and supported by more than 45 faculty and industry mentors.

"What stood out in this programme was the creativity of the solutions and the empathy behind them," said Maral Alexandrian, Acting Executive Director at the National MS Society. "Each project reflected a deep awareness of the lived experiences not only of people with MS, but also of anyone whose mobility, communication, or cognitive abilities are impacted in ways that make daily life less accessible."

(Courtesy: Emirate News Agncy)

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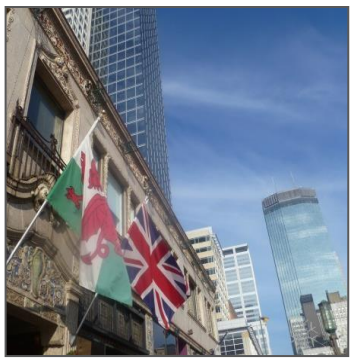

Programme and Events

World Design Congress
Design for Planet
London 2025

9-11 September 2025

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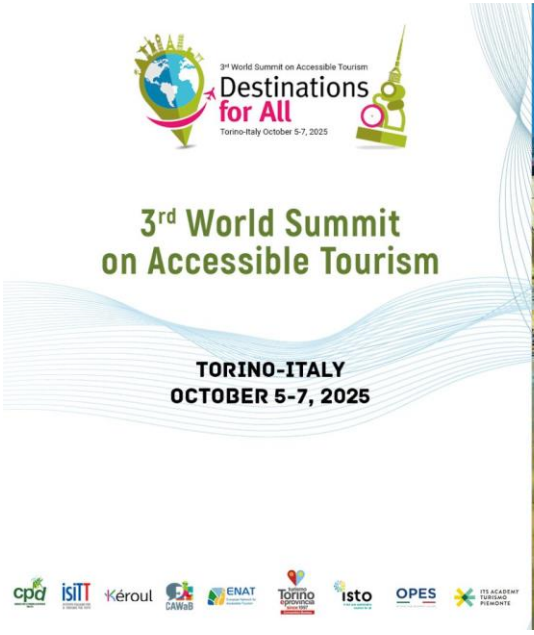

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STUDENT SERVICE DESIGN COMPETITION!

OBJECTIVE:
The competition aims to leverage students' creativity and service design skills to address real-world challenges faced by India's social sector. Solutions must be innovative, actionable, and culturally sensitive, motivating NGOs to implement them effectively.

ELIGIBILITY AND PARTICIPATION:
Open to undergraduate, postgraduate, and doctoral students enrolled in academic institutions during 2025.

KEY DATES:
Registration Deadline: **Feb 15, 2025**

Submission Deadline: **Jun 15, 2025**

Announcement of finalist teams: **Aug 15, 2025**

Final Presentations: **Oct 6-8, 2025,** at the ServDes25 Conference

Announcement of Winners: **Oct 8, 2025,** at the ServDes25 Conference

servDES'25

భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
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Indian Institute of Technology Hyderabad

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Scan to know more about the competition

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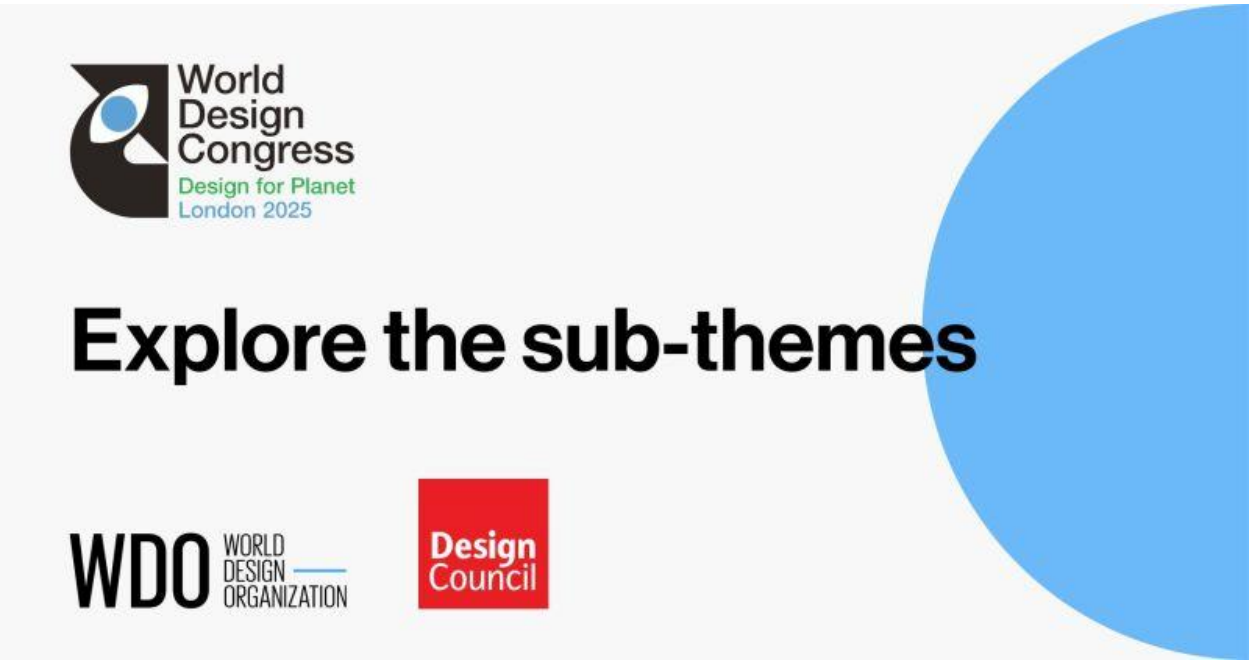

Are you curious about submitting a paper or poster to the World Design Congress in London this September? In line with the hashtag#DesignforPlanet theme, swipe to learn more about the first submission sub-theme of Shifting Paradigms — From Extractive to Regenerative Design, which aims to highlight work that showcases the transformative potential of design in addressing planetary health.

Don't miss out! Submissions are open globally until 31 May 2025.

Spark Student Design Awards: Any current University-level (or above) student, in any design category. (All entries in this competition must be student work, not professional work. Entries may be submitted from any time period of the student's study–could be a piece from last year).

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International Design Conference
"Celebrating Diversity, Creating Equality"

2/10/2025

Rama Gheerawo

Design for All: Your Love Letter to the World

"Design is my love letter to the world! It has the power to transform everything, reduce exclusion and shine creative light wherever it is needed."

XX Tallinn Design Festival "Design for All" Krulli kvartal
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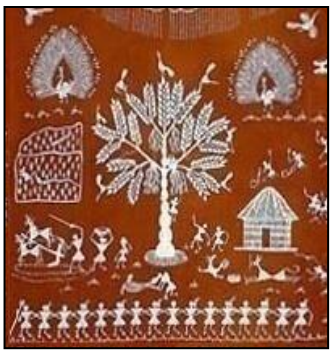

Job Openings

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