

Inclusive design – Why should you care?

The true cost of not complying with BS 8300-1:2018 and
BS 8300-2:2018, Approved Document M and the Equality Act 2010

Experience a safer
and more open world





Contents

PART 1 The importance of inclusive design	3 – 5
PART 2 A duty of care	6 – 7
PART 3 The fallout of non-compliance	8 – 9
PART 4 Understanding the guidelines	10 – 11
PART 5 Managing the fire risks	12 – 13
PART 6 Designed for all	14 – 15

PART 1

The importance of inclusive design

Inclusive design aims to remove the barriers that might prevent an individual from using an environment freely and with ease. All people should be able to access and use a building and its facilities easily, comfortably and independently, including being able to escape in the event of a fire or other emergency. It is an approach that ensures a space works better for everyone, whether that space is a school, office, hospital, gym, retail shop or other public building.

When talking about inclusive design, many people immediately think of those with a disability or specific, specialist requirements. While inclusive design of course encompasses the needs of these people, its key objective is to make a site inclusive for all, no matter what. In fact, despite public perception and the wheelchair being the symbol for accessibility, Disability Sport states that less than 8% of disabilities require the use of a wheelchair.²

Furthermore, ‘inclusivity’ might be more all-encompassing than you first think. For example, everyone will experience limited mobility at some point in their lives; whether it’s as a tourist laden with bulky luggage, a parent with a young child, an older person, or an individual that might have suffered an injury.

Let’s consider some of the challenges that people might face on a day-to-day basis.

- + **Accessibility is not always inclusive** – access ramps to buildings may give people in wheelchairs or those with prams and pushchairs ease of entry to a building, but it often forces them to take a separate entrance. Inclusive design measures, such as no-step entries, could help overcome this challenge.
- + **Greater burden on the individual** – people with temporary or permanent disabilities will tend to plan ahead before visiting a new premises to ensure they are able to access the building, often assuming that this will be a difficulty. Instead of placing the burden of ensuring accessibility on building users more buildings should be designed with inclusivity front of mind.
- + **Equal access isn’t just about disabled access** – whilst modifications may be made for external access, what about space restrictions or the weight of doors, consider a younger child needing to open a door or a pregnant person requiring additional space. Inclusive design takes into account all aspects of the building and its potential users.

Definition: Inclusive design

Approach to the design of the environment, including buildings and their surrounding spaces to ensure that they can be accessed and used by everyone.¹



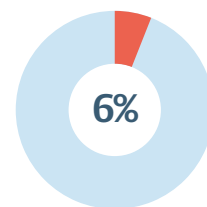
BY **2037**
OVER 65s
WILL ACCOUNT FOR
NEARLY A **QUARTER**
OF THE POPULATION.³



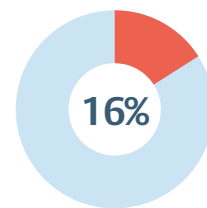
An inclusive design approach can help to deliver the following five key benefits to users:

- 1 Welcoming to everyone
- 2 Responsive to people's needs
- 3 Intuitive to use
- 4 Offer flexible options, depending on the requirements of the user
- 5 Optimise independence

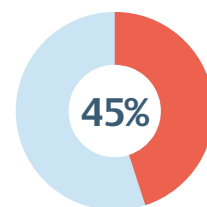
Around...



of children



of working age adults



of adults over state pension age

... are disabled.⁴

Key market drivers

Not only is inclusive design a best practice method and the most ethical approach to take, but a range of key market drivers mean those responsible for designing buildings and specifying solutions can now simply not afford to ignore it.

Ageing population

The Government Office for Science reports that the average age had exceeded 40 for the first time in 2014, and that by 2040 nearly one in seven is projected to be aged over 75. And with those over 65 accounting for nearly a quarter of the population, buildings need to be designed to meet the needs of an increasingly ageing population. These might have specific requirements because of health issues, or more generally experience movement difficulties or strength issues due to age.

Disabilities

The UK government reports there are over 11 million people working in the UK with a limiting long-term illness, impairment or disability, this equates to 1 in 3 of the UK active workforce, with the most commonly reported being those that affect mobility, lifting or carrying. The prevalence of disability rises with age too. With figures showing the number of disabled older people increased by 400,000 – a growth of 8.5% – between 2002-03 and 2011-12, there can be no question that this demographic cannot be ignored.

The key reason for those with a disability deciding against a purchase?

Inaccessible premises



Buying power

The key reason for those with a disability deciding against a purchase? Inaccessible premises, says Disability Rights UK. What's more, disability charity Purple states that more than 1 in 5 potential UK consumers have a disability, with businesses losing approximately £2 billion a month by ignoring the needs of disabled people.⁶ Research shows that high street shops lose £267 million a month by not being accessible; restaurants, pubs and clubs lose £163 million; and supermarkets a staggering £501 million. That's without even mentioning the 'grey pound', which accounts for £320 billion of annual household spending, with the over-50s holding over three-quarters of the nation's financial wealth.⁷

Sustainability

Implementing sustainable business strategies in line with the country's legislative and environmental ambitions has never been so urgent, helping the UK move towards a greener future. Fit for purpose products are integral to ensuring inclusivity but they are also key to improving building lifecycle costs. A product that can meet the everyday use demands, including that of inclusivity, will reduce the costs of maintaining a building over its lifespan and will therefore limit its impact on the environment.

Ultimately, a well-designed built environment can lead to increased activity levels, better health, and improved quality of life for a full range of users. As the UK's Design Council states: 'Inclusive design aims to remove the barriers that create undue effort and separation. It enables everyone to participate equally, confidently and independently in everyday activities. An inclusive approach offers new insights into the way we interact with the built environment. It creates new opportunities to deploy creative and problem-solving skills.'⁹

One common barrier to inclusive design is around door opening solutions. This challenge might arise because someone is a wheelchair user, or a parent with a young child using a pushchair. Or, it could be due to the physical changes that occur throughout the ageing process – which might include deterioration of sight, hearing loss, a decline in respiratory and cardiovascular functions, or reduced muscle and grip strength – as an older member of society. Nevertheless, carefully considering door opening solutions can make a real difference to the inclusivity of a space.

83% of disabled people have 'walked away' from making a purchase, unable or unwilling to do so.⁵



A duty of care

Inclusive design is everyone’s responsibility. While building owners have a legal duty to ensure all people can gain access to and use a building and its facilities, all those involved in the process – surveyors, architects, planners, facilities managers, specifiers and consultants – have a duty of care to ensure an environment meets the needs of its users.

There are three main policies covering inclusive design that decision makers should be aware of.

1



BS 8300-2:2018 Design of an accessible and inclusive built environment

A British Standard setting out how buildings should be designed, constructed and maintained to create an accessible and inclusive environment for all, BS 8300 was first introduced in 2009. It is for refurbishments as well as new builds.

The standard was updated most recently in 2018, to take account of important legislation such as the Equality Act 2010 and the building regulations covering Approved Document M. Its guidelines are vast and extend to: entrances; door fittings; steps, stairs and ramps; corridors and passageways; surface finishes; visual signs; lighting; storage facilities; and the provision of seating.

The 2018 update to BS 8300 saw the emphasis for the standard shift from offering an ‘accessible’ environment to one that is ‘inclusive’. It now emphasises that those with specific needs should have these accommodated within a general space, and not set apart in a separate area. So, for example, in a care home environment all visitors should be able to access the facility through the same doorway, rather than having to use a side entrance designated for wheelchair users.

The overall aim of BS 8300:2018 is to ensure everyone can use an environment. It addresses all possible requirements for entering, using and exiting a building easily and independently, and so its scope covers all building features. It goes beyond statutory planning and the Building Regulations’ requirements, to offer best practice guidance on making a site inclusive to all.



2

Access to and use of buildings: Approved Document M (for England and Wales)

Approved Document M is the guidance given to help meet the requirements under the building regulations for access to and the use of buildings – whether these are dwellings or other types of facilities – and provides a baseline for accessibility in the built environment. It puts forward practical advice on how to comply with the building regulations, setting out the minimum requirements to ensure a diverse range of people can access and use a building and its facilities.

Building regulations impose mandatory requirements. Failure to comply may result in an unlimited fine being imposed, or an enforcement notice for the building owner, detailing the alteration or removal of work required that contravenes the regulations.

BS 8300-1:2018 and BS 8300-2:2018 works in tandem with Approved Document M to give practical guidance on how its requirements can be incorporated into the built environment.



3

Equality Act 2010 (for England, Wales and Scotland)

The Equality Act came into force on 1 October 2010 and brings together over 116 separate pieces of legislation into one single Act. It provides a legal framework to protect the rights of individuals, and advance equality of opportunity for all.

Importantly, it replaced the Disability Discrimination Act 1995. Many in the built environment still refer to the requirements of the Disability Discrimination Act, when it is actually the Equality Act 2010 that they should be complying with. The fact that there is still such a lack of understanding and knowledge around such an important topic is concerning, given that many are still referring to an Act that is years out of date.

BS 8300:2018 and Approved Document M set out the minimum standards that are needed to adhere with the Equality Act 2010.

Hereafter, when discussing BS 8300:2018, Approved Document M and the Equality Act 2010 collectively, these will be referred to as the guidelines governing inclusive design.

The fallout of non-compliance

"A lot of architects and designers want to do their best to meet inclusivity standards, but then they might face a client that wants to design things out and cover the legal minimum."¹⁰

Julie Fleck, Strategic Access & Inclusive Design Advisor

The quote touches upon a common challenge that many architects and designers will face: clients wanting to do the legal minimum with regards to inclusive design. While the guidelines governing inclusive design will cover the minimum legal requirements, all those involved in the building and specification process for a site should instead be demanding that a project is BS 8300:2018 compliant.

The fallout of non-compliance can be considerable. Anecdotal evidence from countless sources across the industry suggests that many are not using the guidelines governing inclusive design, instead taking a piecemeal approach to what they think will meet requirements. This is, in short, not good enough.

BS 8300:2018 is one of the benchmarks used when auditing buildings for accessibility and inclusivity. As a result, adhering to BS 8300:2018 can have a significant impact on project completion and handover procedures, with the standard being rigorously used by Building Control Officers. While the standard may not be a legal obligation in itself, because it supports the Equality Act 2010 in scope and content and works in tandem with the recommendations outlined in Approved Document M, many building officers will not sign-off on sites that do not adhere to it.

In the event of a discrimination claim, those that can demonstrate adherence to BS 8300:2018 will be on safer ground than those that cannot. While it is the building owner that ultimately bears responsibility for the design of a building, architects and specifiers have a moral and ethical obligation to advise and recommend solutions that enable inclusivity.

Unsurprisingly, if a client were to receive a legal dispute, then an architect or specifier would be called upon to explain why a solution was recommended.

Furthermore, when the market drivers for inclusive design are taken into consideration, the question is: can any organisation afford to not meet the standards laid out in BS 8300:2018? Not only do they make a premises easier for all people to visit, but if you're a business then more customers will spend more money on your products and services. Otherwise, you will likely miss out on substantial profit opportunities.

Instead, the benefits of inclusive design should be acknowledged: greater consumer loyalty, greater differentiation, enhanced credibility, stronger brand awareness, and increased spending opportunities. BS 8300:2018 offers a best practice approach to achieving inclusive design and, as such, should be followed accordingly.

Consider the following insights...

- + 70% of millennials are more likely to choose one brand over another if that brand demonstrates inclusion and diversity in terms of its promotions and offers.¹¹
- + Accessibility experts DisabledGo discovered that 91% of leading UK high street retailers provide no accessibility information about their stores or websites.¹²

And when brands get it wrong, social media users react fast and hold them accountable, meaning any spaces that might be seen as discriminatory are quickly made public. The impact on brand reputation can be significant.

The ongoing class action law suit filed against the MTA (Metropolitan Transport Authority) in New York is one example of companies being called to account for their lack of accessibility. Despite the Americans with Disabilities Act being passed over 30 years ago the MTA is still not in compliance and an audit found that of its 472 subway stations only 114 were accessible to all.

Understanding the guidelines

The following covers some of the key recommendations surrounding door opening solutions, outlined in the guidelines governing inclusive design. The considerations cover doors to accessible entrances, manually operated non-powered entrance doors, and internal doors.

For a detailed overview of the practical guidance set out by BS 8300:2018 and Approved Document M, those involved in the decision-making process will need to seek the assistance of an experienced and knowledgeable supplier in the industry, who can work closely with you to ensure a building meets all the necessary requirements.

1 Accessibility

Approved Document M states that doors ‘should be accessible to all, particularly wheelchair users and people with limited physical dexterity’. Once open, all doors to accessible entrances should be wide enough to allow unrestricted passage for a variety of users, including wheelchair users, people carrying luggage, people with assistance dogs, and parents with pushchairs and small children.

2 Opening and closing forces

The weight of a door, and how heavy it is to open and close, is another key consideration. BS 8300:2018 acknowledges the challenge here, stating: ‘If the force required for opening doors is greater than wheelchair users and people with limited strength can manage, they will be unable to continue their journeys independently. If the force of the closing device is too great or its speed too fast, there is a risk that people could be pushed off balance.’

To enable independent access through a door, the opening force – when measured at the leading edge of the door – should be no greater than 30 N, when moving from the closed position to 30° open. Then, the opening force required from 30° to 60° should be no more than 22.5 N.

In terms of the maximum closing force exerted by a controlled door closing device, this should be within 0° and 15° of final closure. Products that do not offer this capability should be avoided.

The specified door closer should take into account resistance from edge seals, hinge friction, latch resistance and differential air pressure. It should also allow the door to open sufficiently to provide the effective clear width, which is the next consideration to discuss.

3 Effective clear widths

The effective clear width through a doorway is the distance a door needs to be clear of any obstructions when opening, which includes any projecting door furniture that might be installed on the door leaf itself, such as a lever. These minimum effective clear widths are shown here.



Did you know?

For doors requiring a door closer, many suppliers claim to offer compliant solutions by winding down the door closer and its spring to power setting EN 1. However, while this may help people open a door, it will not provide the necessary closing force – especially for fire doors. As a result, this approach is not compliant with the guidelines governing inclusive design, and any organisations suggesting this as an appropriate solution should not be trusted.



4 Door fittings

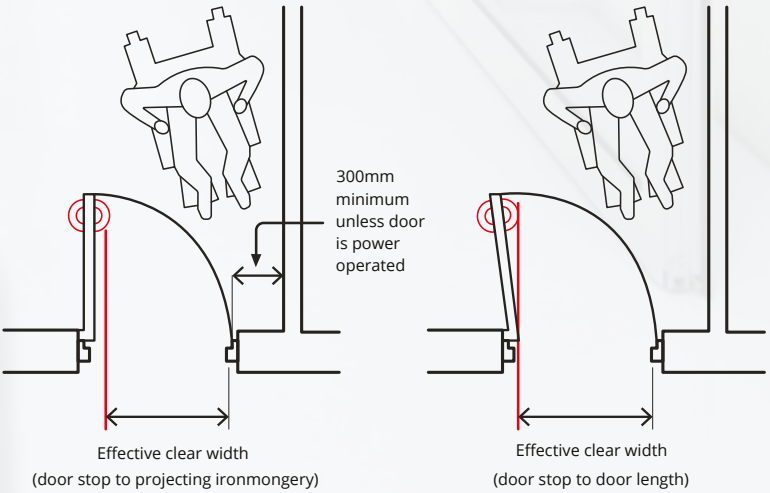
Door opening furniture should be easily reached and provide a secure grip to users. This is critically important to many disabled people, including some disabled children too. It should be possible to operate door furniture one-handed, without the need to grasp or twist.

For wheelchair users, a space alongside the leading edge of a door should be provided to enable them to reach and grip the door handle, and then open it without the user having to release their hold on the handle. Nor should the wheelchair’s footrest collide with the return wall. As a result, Approved Document M states that there must be ‘an unobstructed space of at least 300mm on the pull side of the door, between the leading edge of the door and any return wall’. However, BS 8300:2018 does note that ‘increasing this space to 600mm will improve manoeuvrability, reduce the risk of wheelchairs colliding with the wall, and enable wheelchair users to pass through the door more easily’.

5 Visual considerations

To assist those with impaired vision, doors, their furniture and frames must contrast visually with other door surfaces and their surroundings. A careful choice of colour and materials can help here. In addition, for any door that is not self-closing, or is likely to be held open, the surface of the leading edge must contrast visually with the other door surfaces and its surroundings as well.

Effective clear width of doors



Minimum effective clear widths of doors

Direction and width of approach	New buildings (mm)	Existing buildings (mm)
Straight-on (without a turn or oblique approach)	800	750
At right angles to an access route at least 1500mm wide	800	750
At right angles to an access route at least 1200mm wide	825	775
External doors to buildings used by the general public	1000	775

Managing fire risks

The guidelines governing inclusive design state that buildings must not only avoid creating access and usage issues, but also ensure all people are able to escape in the event of a fire or other emergency.

Fire doors play a vital role in providing protection against smoke and fire. While fire safety has always been of paramount importance, incidents such as the Grenfell tragedy have really shone a spotlight on this issue in public buildings. Fire doors save lives, but only when they are specified, manufactured and installed correctly.

Indeed, the guidelines governing inclusive design make clear that for corridors, fire doors for corridors in particular should be held open with an electro-magnetic device, but self-close when activated by smoke detectors or a main fire alarm system. They should also close should power supply fail, or when activated by a hand-operated switch. Meanwhile, fire doors for individual rooms should be fitted with swing-free devices that close when, again, activated by smoke detectors, a fire alarm system, or when power supply fails.

BS EN 1154:1997 is a British and European Standard that covers the specific requirements for controlled closing devices for swing doors. The standard classifies door closers using a six-digit system.

The third digit is an important one. Depending on the width of the door, the maximum mass is offered, and the related door closer power size identified. So, for a door width of 950mm, the maximum mass should be 60kg, and the door closer power size is EN 3.

However, for any fire door fitted with a door closer, EN 3 is the minimum door closer power size allowed, regardless of what the door width is. Therefore, to comply with the guidelines governing inclusive design, decision makers must opt for a door closer that offers a power setting of EN 3.

As previously raised, some suppliers will try to overcome the challenges surrounding opening and closing forces by winding down the door closer and its spring to the power setting of EN 1. For fire doors in particular, this is a dangerous tactic that does not comply with the guidelines governing inclusive design.

There are, however, door closers available in the marketplace that are able to balance both opening and closing forces for fire doors, ensuring buildings are easily accessible while delivering vital protection against fire and smoke.

To meet the necessary standards, a fire door must pass a series of standardised tests, as well as be properly certified and rated to withstand fire for a set period of time. This testing should be conducted by an independent testing body, in accordance with the relevant British or European standards. If successful, a fire door will be awarded a certificate of compliance.

Relevant certifying bodies to be aware of are Certifire and FIRAS. Certification from these bodies provides vital assurance that the fire door – if installed correctly – will perform as expected.

BS EN 1154:1997 Six-digit door closer classification system

- 1 Category of use
- 2 Number of test cycles
- 3 Test door mass/size
- 4 Fire behaviour
- 5 Safety
- 6 Corrosive resistance



Fire doors save lives, but only when they are specified, manufactured and installed correctly

Designed for all

So why should you care about inclusive design?

Imagine inhabiting a world that is simply not designed for you. Each day being confronted with spaces that present a series of barriers. And these barriers do not have to be explicit accessibility issues – the ones that most commonly cross our minds due to public perception. They can often be smaller, more discrete ones that chip away at a person’s confidence and limit independence.

The elderly, those with a disability and those with specialist needs face this reality on a daily basis. This should not be the case. Our buildings and their facilities should be designed for everyone.

Not convinced by the moral and ethical reasons, because they don’t apply to you?

What about your reputation within the construction industry? If you are part of a project that has a lengthy building sign-off process and costly legal disputes because of non-compliance, what are your chances of being specified for future projects, not to mention the costs you’ll incur for your own business?

Can you really afford the repercussions of a discriminatory claim on your brand and bottom line? Get it right, help building owners, and you’ll reap the rewards of being a trusted supplier, strengthening brand loyalty and turning customers into ambassadors.

All those involved in the design and construction of a building should not simply be working towards inclusivity, but demanding it every single time. Whether you’re a building owner, facilities manager, architect or specifier, if you’re involved in this process then you have a responsibility and duty of care to make sure inclusive design is the number one priority.

Door closer checklist

1	2	3	4
Is the door closer compliant with the guidelines governing inclusive design, which covers BS 8300:2018, Approved Document M and the Equality Act 2010?	Does the door closer have relevant fire certification, and does it meet the performance standard BS EN 1154:1997?	For fire door installations, does the door closer deliver a minimum power size of EN 3?	What warranty is the door closer offered with, to help reduce whole life costs?



How can we help?

Ultimately, door opening solutions can make a dramatic difference to how inclusive a building is. Users need high quality, reliable hardware products that can meet inclusivity and accessibility requirements without question.

So, when seeking a door closer solution that complies with the guidelines governing inclusive design, decision makers should ask these essential questions...

ASSA ABLOY is the global leader in access solutions and has been helping designers, architects and building owners specify the best products and systems to achieve building access for decades.

With the breadth and depth of product portfolio that comes from being part of a global company, we not only manufacture quality products but our experienced team work with the design and construction industry to write specifications, test systems, install correctly and supply ongoing maintenance and inspection.

To discuss how we can help with ensuring door opening solutions are compliant with the guidelines governing inclusive design, please contact: AASS-Forum@assaabloy.com

References

¹ British Standards Institute, BS 8300-2:2018 Design of an accessible and inclusive built environment, p.5

² Disability Sport, 'Facts and Figures About Disabled People in the UK', <http://www.disabilitysport.org.uk/facts-and-figures-about-disabled-people-in-the-uk.html>

³ RIBA Journal, 'Are building regulations the inclusion standard to meet?', <https://www.architecture.com/knowledge-and-resources/knowledge-landing-page/are-building-regulations-the-inclusion-standard-to-meet>

⁴ Work in Mind, 'Inclusive design: Are disabled people being let down on a global scale?', <https://workinmind.org/2018/12/03/inclusive-design-are-disabled-people-being-let-down-on-a-global-scale/>

⁵ Enabled City, 'Why inclusive design matters', <http://enabledcity.com/inclusive-design-matters/>

⁶ Purple, 'The Purple Pound – Infographic', <https://wearepurple.org.uk/the-purple-pound-infographic/>

⁷ ECI, 'Consumer Trends – The Grey Pound', <https://www.ecipartners.com/news-and-insights/insights/the-grey-pound>

⁸ Design Council, 'The principles of inclusive design', <https://www.designcouncil.org.uk/sites/default/files/asset/document/the-principles-of-inclusive-design.pdf>

⁹ RIBA Architecture, 'Inclusive design the standard to reach', <https://www.architecture.com/knowledge-and-resources/knowledge-landing-page/inclusive-design-the-standard-to-reach>

¹⁰ Accenture, '2018 Accenture Holiday Shopping Survey', <https://newsroom.accenture.com/news/millennials-likely-to-be-the-biggest-spenders-this-holiday-season-accenture-survey-reveals.htm>

¹¹ UK Government, 'Government concerned at 'shocking' evidence of the inaccessibility of the British high street to disabled people', <https://www.gov.uk/government/news/government-concerned-at-shocking-evidence-of-the-inaccessibility-of-the-british-high-street-to-disabled-people-despite-their-200-billion-spending>

The ASSA ABLOY Group is the global leader in access solutions. Every day we help people feel safe, secure and experience a more open world.

ASSA ABLOY
Opening Solutions

ASSA ABLOY Opening Solutions UK & Ireland

Door Hardware Group
School Street
Willenhall
West Midlands
WV13 3PW

+44 (0) 845 070 6713
csdcomm@assaabloy.com

www.assaabloyopeningsolutions.co.uk

July 2020