



Creating accessible bathrooms for the visually impaired

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Home is where the hazard is...

A person's home should always be their sanctuary, a safe space of their own in which they can confidently and comfortably go about their day-to-day life. However, for the one person in 30 living with visual impairment in the UK, the home can be a source of anxiety, fear and even danger. This can be particularly true of the approximately 360,000 people who are registered with their local authority as sight impaired or severely sight impaired, meaning they have severe and irreversible sight loss that impacts their daily life. In fact, almost half feel "moderately" or "completely" cut off from people and things around them.

Specifically how it affects them and how a person uses their surroundings depends on numerous factors. For example, an individual can be born with visual impairment or they can experience diminished sight over time, and this can happen to anyone at any stage of life for a multitude of different reasons. Older people are, nevertheless, more likely to suffer sight loss – with one in five over-75s, and one in two over-90s living with vision problems – and they are more likely to also live with other conditions that can have an impact on their occupational performance. Indeed, about 2.5 per cent of people over the age of 75 are living with both visual impairment and dementia.

Meanwhile, adults with learning disabilities are 10 times more likely to be visually impaired than the general population and, on the other end of the scale, there are some 25,000 children with sight loss nationwide – equivalent to two in 1,000 children. Equally, as much as half of these children will have other disabilities that will affect how they use their home environment.

While the challenges and difficulties cannot be avoided entirely, it is almost always possible to make the lives of people with visual impairment more comfortable and less stressful. Increased awareness is key to this, as is an understanding among professionals of how to support independence and occupational performance in the home in practical and realistic ways. In particular, rooms, especially the bathroom, should be adapted appropriately to promote safety and dignity, and this guide has been produced to ensure it is exactly that which is happening.

Understanding impaired vision

Visual impairment is classed as a limitation of one or more of the functions of the eye or visual system that inhibits vision or visual field and acuity, and cannot be corrected with standard glasses or contact lenses. Within this definition, people can be registered as either sight impaired, which was previously known as “partially sighted”, or severely sight impaired, which was previously termed “blind”.

Even with these two specific terms, the classification of visual impairment remains extremely broad as sight loss is something that can be experienced in radically different ways from one individual to the next.

Moreover, there are many causes of sight loss. The leading conditions include age-related macular degeneration, glaucoma, cataract and diabetic retinopathy, which are eye-specific ailments. Beyond these, vision can be impaired by other conditions that are not directly associated with the eye itself and instead lead to neurological damage. These disorders include stroke, motor neurone disease and Parkinson’s disease.

How does visual impairment affect daily life?

Frightening research in recent years has found that visual impairment can lead to lower quality of life without appropriate and practical support. One study found that people with sight loss are more likely to struggle with mobility, washing, dressing and completing day-to-day tasks, as well as experience more pain and anxiety than those without visual problems.

While generalisations should never be made when it comes to visual impairment, it is not wrong to suggest that those living with sight loss frequently find it more challenging to use the environment and space around them confidently. This is particularly true in the bathroom, and even more so if it has not been installed or adapted to accommodate the user’s needs and typical routines. Common challenges those with visual impairment experience in the bathroom include:

- Difficulties with orientation
- Poor depth perception
- Issues with locating items within a room, usually due to lack of definition
- A lack of general confidence, due to fear, to engage independently in activities or areas of occupational performance in the home



Adapting a bathroom for the visually impaired is not going to disadvantage other people living in the property who are not. Equally, most of the tips in this guide will support the orientation of people with other conditions that affect cognitive ability as well as low vision.





Design that encourages wellbeing

Why is it important to adapt bathrooms for the visually impaired?

Enhancing independence and safety at home is critical for those living with visual impairment. A fall in the bathroom can have severe psychological consequences on top of the physical injury and can lead to individuals becoming extremely fearful of their own home. The resulting inactivity and isolation can substantially damage wellbeing and health, and restoring confidence can take a great deal of work and time.

The enormous impact can also be witnessed in society as a whole as falls associated with sight loss cost the NHS £25.1 million every year. While this sum is already great, it looks set to grow further because the number of people living with visual impairment is predicted to increase in the coming years, due to both the rapidly ageing population and the rising incidence of some of the causes of vision problems, such as obesity and diabetes. Experts estimate that more than 2,250,000 people in the UK will experience visual impairment by 2020, with that number expected to be higher than 2,880,000 by 2030 and nearly 4,000,000 by 2050.



Now is the time to act to alleviate some of the problems. Modifying bathrooms with the right tools, lighting and contrast and creating spaces that meet the requirements of people with visual impairment will help them to enjoy a good quality of life with dignity, while boosting safety and cutting the risk of accidents in the home.

There is no one-size-fits-all solution

It is always important to remember that when designing and installing a bathroom for a user with visual impairment that a solution that works for one person might not necessarily help another. Accordingly, the individual client's needs must be analysed and treated as a unique case in order to identify the optimum solution for each user. They know their home and routine better than anyone else so it is crucial to talk to them about their daily schedule so that the bathroom can be personalised to match that for the best possible outcome. Above all, it is critical to keep things as logical as possible but make sure it is the client's logic and never your own.

Five key points when designing for the visually impaired

It is generally accepted that the following five elements can be used to form the basis of a design strategy that protects individuals with sight loss and allows them to remain as independent as possible for as long as possible.



1

Education, education, education

People with sight loss often know that they need to improve their living environment but they do not always know how to do it. Therefore, it is important to provide accurate information and advice that allows them to make informed decisions on adaptations that solve problems while supporting their usual routine.

2

Light the task, not the room

Good lighting will ensure safety and security, but instead of focusing on illuminating a whole room it is imperative instead to implement task-specific lighting. For example, bright lights above the basin that illuminate the area where someone will wash their hands or brush their teeth will be most effective. Indeed, halving the distance between the light and the task being performed can increase visual acuity fourfold. It is also important to use non-reflective materials to reduce glare.

3

Contrast and colour

Correct contrast is absolutely crucial in enhancing a room anywhere in the home for the visually impaired. In particular, using two colours where the light reflective value (LRV) difference between both colours is greater than 30 will create the most noticeable contrast between an object and its surroundings. Furthermore, colour contrast is best achieved with contrasting shades of the same colour rather than different colours.

4

De-clutter

Clutter and redundant objects or pieces of furniture should be removed to make the environment less challenging. There should be plenty of space to create safe and logical routes around the bathroom that support the person's usual routine and habits. Additionally, storage must be easy to access to prevent the user from having to search or stretch. Wall mounted items such as toothpaste dispensers can help with ease of use and accuracy.

5

Accessibility

Equipment and furniture should be simple to locate and only where the individual user would habitually expect to find them. Drastically changing the layout of the bathroom would make it inaccessible, and increase risks and frustration. The use of tactile devices and controls or those with auditory feedback, such as on specially designed electric showers, also enhance accessibility and ease of use.



BATHROOM DESIGN SPECIFICATION GUIDANCE FOR THE VISUALLY IMPAIRED

A bathroom in a private home or public sector building needs to include various pieces of essential equipment and furniture and that is no different for those designed specifically for the visually impaired. Expanding on the key elements mentioned previously, these tips look at the considerations that need to be explored in line with the user's needs to ensure the right products are installed in the right way when creating a space that is best suited to them.

Layout

- Maintain the existing layout so that the user's typical routine can continue as normal
- Items used frequently need to be accessible at all times and in the areas where the user expects to find them
- Make sure circulation routes in the room are obstacle free
- Box in or, better still, entirely remove any exposed pipework



Toilets

- Only ever place the toilet where the resident is used to having it
- A high contrast toilet seat and flush control will help the user to locate them, but if they are positioned where the resident has always been used to using them this might not be necessary – it is worth having a conversation with the client to determine what is best for them
- If possible make space around the toilet to support free movement

Showers

- Keep it simple with an electric shower with easy to use controls
- Models with raised, tactile and illuminated push buttons for temperature and flow control are best but also consider devices that can be adjusted with remote controls or smartphone apps for clients that need a carer as these can allow remote control of the shower outside the shower room and preserve dignity
- Electric showers that provide auditory feedback that tells the user what they are doing are an excellent option
- Make sure there is no externally heated pipework to reduce the risk of burns
- Thermostatically controlled showers that limit the temperature to a safe level will give extra protection against scald injuries
- The shower area itself will be safer if it is designed as a level access wet room as traditional shower cubicles often feature raised lips on entry that can increase the chance of trip accidents. Watertight wet rooms can be installed quickly and easily – typically in less than half a day – with the use of specially designed wet room formers and tanking kits



Shower screens

- Avoid highly reflective glass shower screens
- Glass screens are OK if the task lighting is angled in way that illuminates the shower area without reflecting directly off the screen and causing glare
- Frosted versions are an option if the client has a carer to ensure privacy
- Enclosed shower areas are not always the best thing for people with certain conditions, such as MS, that can be aggravated by steamy environments. If this is the case, make sure the area is well ventilated

BATHROOM DESIGN SPECIFICATION GUIDANCE FOR THE VISUALLY IMPAIRED

Storage

- Question whether vanity units and cupboards need hinged opening doors – sliding or folding doors might work better depending on the space available or even no doors at all if that suits the user
- The colour of door handles must contrast against the doors so they can be identified easily
- Avoid gloss finish or glass doors that can cause significant glare – a matte finish is typically a better option
- Position each unit at a height that is suitable for the specific user/s
- A small soap dish fixed to a shower riser rail does not usually give enough space to accommodate the user's products – a bigger shelf in the shower area or wet room is better in most cases



Flooring

- Clear contrast in floor to wall colour aids proprioception and depth perception
- Flush access and level flooring throughout is ideal to reduce the risk of trips and falls
- Make sure it is clear where the floor ends and the wall starts with high contrast colours so the room boundaries are well-defined
- Block colours are ideal and patterns are best avoided
- Non-reflective, matte flooring is best to eliminate reflection or glare from lighting
- Texture changes to provide sensory feedback can be useful in identifying specific areas within a room for the most visually impaired

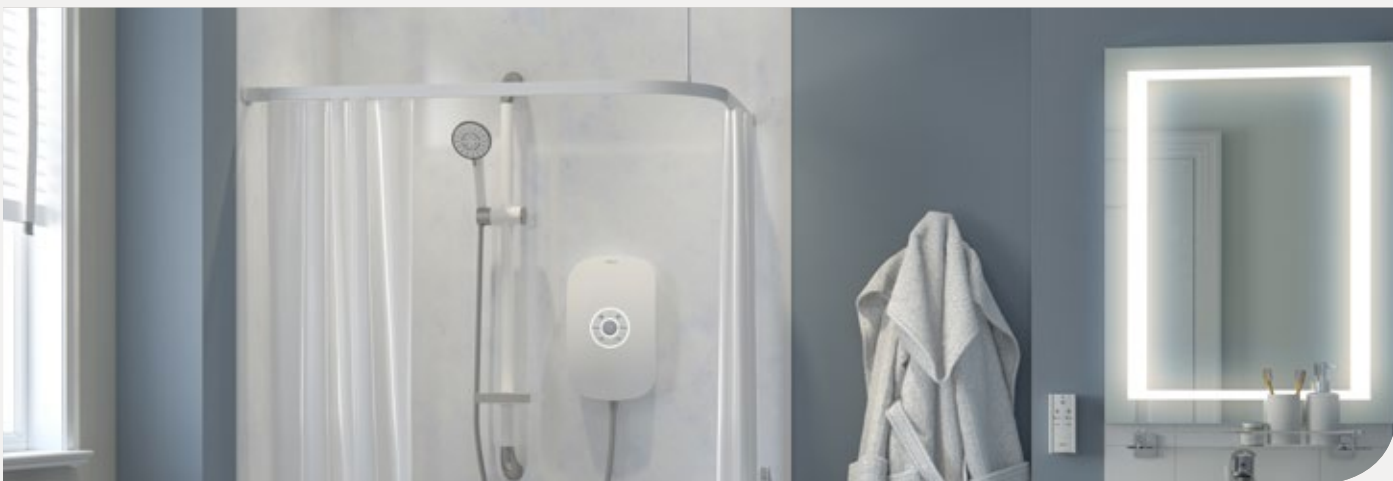
Basins

- Contrast the basin against the wall and floor – if the basin is a standard white unit make sure the wall is painted or papered a colour that has an LRV difference between the basin and wall greater than 30
- The back of the basin should be big enough to accommodate the products and equipment the client will need when using it, such as toothbrushes, toothpaste and soaps. If that is not possible it is important to install a shelf directly above the basin at the right height for the user



Doors

- Whether the door should open outwards or inwards depends on access to the room and the preferences of each specific user, but bear in mind that if someone falls inside the bathroom there is a risk that they could get stuck behind the door if it opens inwards
- ADM evidence suggests that pivoted/hinged doors should swing away from the direction of travel therefore consider whether door can open both ways
- Consider sliding or folding doors to maximise space on both sides



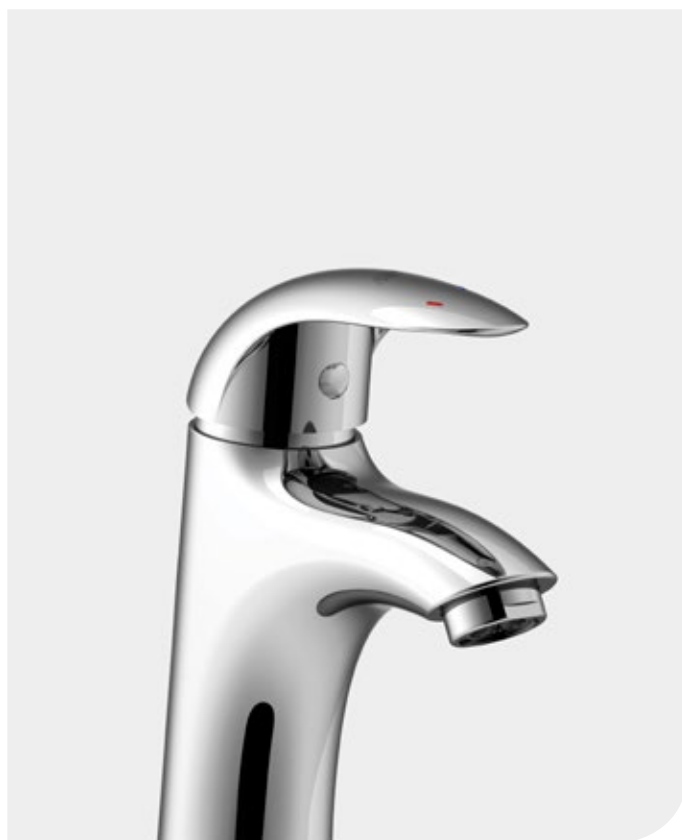
Lighting

- Identify how much natural light enters the bathroom at different times of day, paying particular attention to the times that the client typically uses the room and for what tasks
- Install task-specific lighting, such as separate down lighting that illuminates parts of the room, including the basin, toilet and shower areas, rather than focus on lighting the entire bathroom
- Lighting controls that can be manually adjusted to support different tasks are a good idea

BATHROOM DESIGN SPECIFICATION GUIDANCE FOR THE VISUALLY IMPAIRED

Taps

- Mixer taps may be easier to use depending on the client's requirements and dexterity but it hangs on what they are familiar with
- The simpler the better
- If using a lever controlled mixer tap it will be possible to implement a physical marker so that the user can easily find their optimum temperature. For example, tactile, bump stickers can be positioned where the lever will reach at the temperature that is most suited to them
- Avoid any exposed parts that can get hot and cause burns
- Clearly marked taps are vital, with colour coding for hot and cold, as are those with raised indicators
- Thermostatically controlled taps are the safest option as they limit the temperature to a point that reduces the risk of scald injuries



Sockets and switches

- If the client is accustomed to having a socket for a shaver in the bathroom make sure that it is positioned near to where it is typically used and at a level to suit the resident
- Ensure that sockets and switches are easy to access and not covered by other objects
- Socket fascias and switches must be in a high contrast colour so that they can be distinguished from the wall itself



Towel rails

- Low surface temperature (LST) models are the safest option
- Heated towel rails are generally best avoided, unless specifying LST models, as by their very nature they heat up and can be especially dangerous if the resident falls against them in the bathroom
- If the client specifically requests them, position them where they are most familiar with finding them, which is usually close to the shower so that the user does not need to exit the washing area to get their towel

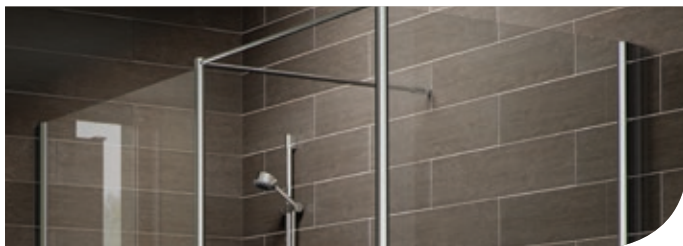
Accessories

- Opt for accessories – everything from toilet rolls to towels – in colours that contrast against their surroundings to make them easier to identify
- Find out what colours the user associates with certain tasks and apply contrasting shades on that basis
- Mirrors can be a problem if they cause glare but many users will need one, particularly if the bathroom is to be used by a number of people with varying abilities. If one is needed place it above the sink and make sure that task lighting is angled so that it does not reflect directly off the mirror in to the client's face. A roller blind in front of the mirror that can conceal it when it is not needed might work depending on the preference of the user. An alternative option is to conceal the mirror within a unit so that it can be closed to remove reflection/glare when not in use
- Make sure the things that are used frequently are always at hand and only in the places where the client expects to find them



Tiling

- Non-reflective, matte tiling will eliminate unhelpful glare and reflection from lighting
- Block colours work best so try to avoid patterned designs
- Make sure contrast is used to help the client identify areas



Heating

- Underfloor heating is optimum as it removes floor level pipework trip hazards and radiators that can be extremely dangerous if the resident accidentally falls onto them, which could result in burn injuries as well as the usual damage from the impact of the fall
- If radiators cannot be avoided, low surface temperature models are the ideal

Mobility aids

- Mobility aids, including grab rails and shower seats, are only ever needed if the user has a combination of mobility problems and visual impairment because a user with visual impairment alone may not benefit from them
- If grab rails and shower stools are needed they must contrast against the wall and be positioned only in the places where the client will expect to find them



10-POINT QUICK FIRE RECAP

- 1 Talk to the client to identify not only their needs but also their usual habits in the bathroom and at what times of day
- 2 Keep the layout and things within the room logical to the user and ensure everyday objects are where they expect to find them
- 3 Contrast is critical, create contrasts where the LRV value between colours is more than 30
- 4 Light the task, not the room
- 5 Avoid reflective surfaces
- 6 Confidence in the environment leads to maximising of engagement and independence
- 7 Keep it simple – there is no point installing adaptations for things that the client is never going to use
- 8 Remove clutter and unnecessary items of furniture
- 9 Be creative and be prepared to have to completely rethink traditional bathroom design
- 10 Be flexible



Summary

While this guide provides a comprehensive overview of the principles of designing bathrooms for the visually impaired, it should not be used in place of but instead alongside input from the client. It is vital that plumbers and installers take the time to speak to the individual users to get a definitive account of their routine and habits in the bathroom. By finding out exactly how people use their own space it becomes a lot simpler to decide what the most appropriate and helpful adaptations will be. Equally, it is important to work closely with an experienced adapted living solutions provider, such as AKW, for the best expert guidance on ensuring accessibility.

It is also critical to remember that modifying a bathroom is not just about highlighting where there are risks and trying to reduce them. It is also about supporting the visually impaired when taking those risks to help the user to achieve a normal routine in the room that allows them to complete tasks that are meaningful to them. Indeed, supporting positive risk taking can have a dramatic influence on the user's wellbeing and confidence that will make them more likely to engage in day-to-day activities that they had perhaps become fearful of attempting independently for a more positive and independent future in their home.

Talk to the experts

Contact us today to book a consultation with a member of our 60-strong team of sales and surveying experts. They can tailor a solution to your specific resident, building and budget needs. You can request a visit at www.akw-ltd.co.uk/contact-us or alternatively contact us using the details below.

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About AKW

AKW are the leading designers and manufacturers of accessible bathroom and kitchen products having supplied this specialist market for over 25 years. We supply the majority of social landlords, local authorities and care and nursing home groups in the UK as well as customers internationally. We work closely with OTs and other healthcare professionals when designing our products to ensure they meet the specific needs of our end users. Our broad range of products include:

- specialist care showers (electric and mixer showers)
- wet room (level access showering) kits
- low level shower trays
- safety shower screens and curtains
- raised height sanitaryware with paddle flushes and seats designed for side transfer
- Geberit shower toilets
- lever taps
- grab rails
- Doc M packs
- accessible kitchens with optional ActivMotion® rise and fall units

Adam Ferry Biography:

Adam Ferry is an Associate of The OT Service and Director of UK Therapy Services, independent companies specialising in providing high quality Occupational Therapy assessment, treatment and consultancy for the private, statutory and business sectors. He has spent more than 10 years as an Occupational Therapist, currently managing rehabilitation and acute service within the NHS. As an associate of The OT Service Adam organises the CPD programme for The OT Show. He works with a number of manufacturers and distributors of healthcare products in a consultancy capacity. Adam is a member of the British Association of Occupational Therapists and the Royal College of Occupational Therapists Specialist Section - Independent Practice as well as being registered with the Health and Care Professionals Council.