

PRINCIPLES FOR
'BEYOND COMPLIANCE'
ACCESSIBILITY IN URBAN
REGENERATION

DESIGN FOR DIGNITY GUIDELINES

DEVELOPED IN COLLABORATION WITH WESTPAC GROUP AND AUSTRALIAN NETWORK ON DISABILITY



Barangaroo





CONTENTS

- 1. Background Context 03
- 2. Functional Elements of Dignified Access 11
- 3. Case Study: Public Domain Barangaroo South27
- 4. Case Study: Commercial, Barangaroo South 31
- 5. Notes And References 34

The outcome of creating the ‘best places’ means “all people feel equally welcomed, their basic needs are met so that each can work and live with dignity and respect...”¹

INTRODUCTION

Designing for dignity should be part of every urban regeneration project. After all, thriving, vibrant places are the heart and soul of community and citizenship, where all people feel connected and included in all their diversity.

The challenge however is how we, as developers, designers, builders, asset owners and managers can best shift our own ‘ableist’ bias, to integrate into the design and operation phases, a more inclusive view of how people of all abilities access and engage with place, and most importantly, how they can do so seamlessly with equity and dignity.

The ‘Design for Dignity’ Guidelines (Guidelines) are a first step toward this shift, and forms a fundamental part of the voluntary commitment to accessibility and inclusion at Barangaroo South. It is by no means exhaustive. In fact, the objective of this document is to prompt ‘open-source’ contributions to content from a range of voices across the disability community and property value chain.

It is hoped this resource becomes a comprehensive repository of practical information, tips and guides that contribute to ‘best practice’ or beyond ‘DDA compliance’ outcomes for everyone, on any Lend Lease project, and hopefully, an exemplar guide across the property industry more broadly.

STATEMENT OF OUTCOMES FOR ACCESSIBILITY AND INCLUSION AT BARANGAROO SOUTH

In implementing the Guidelines, our ambition is to elicit the following responses from people with a disability when they visit or work at Barangaroo South:

- I feel genuinely welcome
- I can get around easily
- I am part of the community, just like everyone else
- Being here makes me feel good
- There are good opportunities accessible for me here
- My voice is heard and my opinion is valued

STRUCTURE OF GUIDELINES

This document is divided into 5 sections:

Section 1: Background Context
This section outlines the context for Lend Lease and the Barangaroo South Project’s commitment to accessibility and inclusion, defining ‘disability’, providing an overview of key regulatory frameworks, and summarizing the stakeholder engagement approach.

Section 2: Functional Elements of Dignified Access - Case Study: Westpac Group

This section outlines ‘beyond compliance’ suggestions for safe, dignified, equitable access by functional space element. The fitout for Westpac Group’s commercial spaces in Tower 2 at International Towers Sydney is used as a case study of best practice inclusive design.

Section 3 Case Study: Public Domain, Barangaroo South

This section provides a summary of key issues raised in the consultation with disability stakeholders regarding the design and operation of the proposed public domain space Barangaroo South.

Section 4 Case Study: Proposed R7 Building – Barangaroo South

This section provides a summary of issues raised for ensuring safe, equitable, dignified access for the proposed R7 building at Exchange Place which will be a mixed commercial space.

Section 5: Notes and References

This section provides a listing of resources and references.

Disclaimer: These guidelines are for information purposes only. Advice on the material contained in this document should be independently sought from a DDA design expert.

1

BACKGROUND CONTEXT

WHAT DO WE MEAN BY 'DISABILITY'?



'Disability', for the purposes of these guidelines is where people with sensory, cognitive, physical or other conditions experience unintended barriers when engaging with the built environment². There are of course, many definitions of disability.

The World Health Organisation reports there are over 1 billion people with disabilities globally, with between 110-190 million experiencing profound disabilities³.

These numbers are expected to increase as populations age, and the prevalence of chronic health conditions such as diabetes, cardiovascular and mental illnesses increase.

The spectrum of disability is therefore broader than the stereotypical images of people in wheelchairs, deafness and blindness.

There are other health and environmental factors influencing patterns of disability including: transport and other accidents, natural disasters, war, diet, and substance abuse⁴.

So, when it comes to the built environment - accessibility is whether the designs are 'enabling' or 'disabling', 'empowering' or 'disempowering', and whether the experience of the place feels inclusive or marginalised.

There has also been a shift in institutional thinking about disability, away from a medical to a social view, encapsulated in terms of accessibility and inclusion.

Institutional responses are now actively focusing on removing functional and environmental barriers to enable greater social and economic inclusion⁶.



Workplaces of the future will need to contemplate appropriate and flexible physical and cultural amenity.

COMMUNITY AND GOVERNMENT RESPONSE TO DISABILITY IS GAINING GREATER PROFILE AND VISIBILITY.

In Australia, the Commonwealth government has a ten-year strategy in train¹⁷ to improve the participation of people with a disability and their carers, in the community and economy, and ensure appropriate support is in place for better quality of 'whole-of-life'.

In addition, the staged rollout of the National Disability Insurance Scheme - a funding reform will see the government fund long term care and support for almost half a million Australians with a disability or mental illness by 2019¹⁸.

Local governments¹⁹ and government departments across Australia are also developing strategic responses to accessibility and inclusion²⁰ within their immediate communities to improve program and service delivery, as well as enable citizenship and advocacy for people with a disability and their carers.

In parallel, the federal government cost of providing pension support for an increasingly ageing population with an extended life expectancy, may no longer be as sustainable.

The graph below²¹ shows how the probability of disability increases with age, from 1:13 chance at age 15 to 1:2 chance at age 75:



Older Australians will be expected to work longer²², and reviews are in train to reduce barriers for older people participating in the workforce or other productive work²³.

Workplaces of the future will therefore need to contemplate appropriate, flexible physical and cultural amenity.

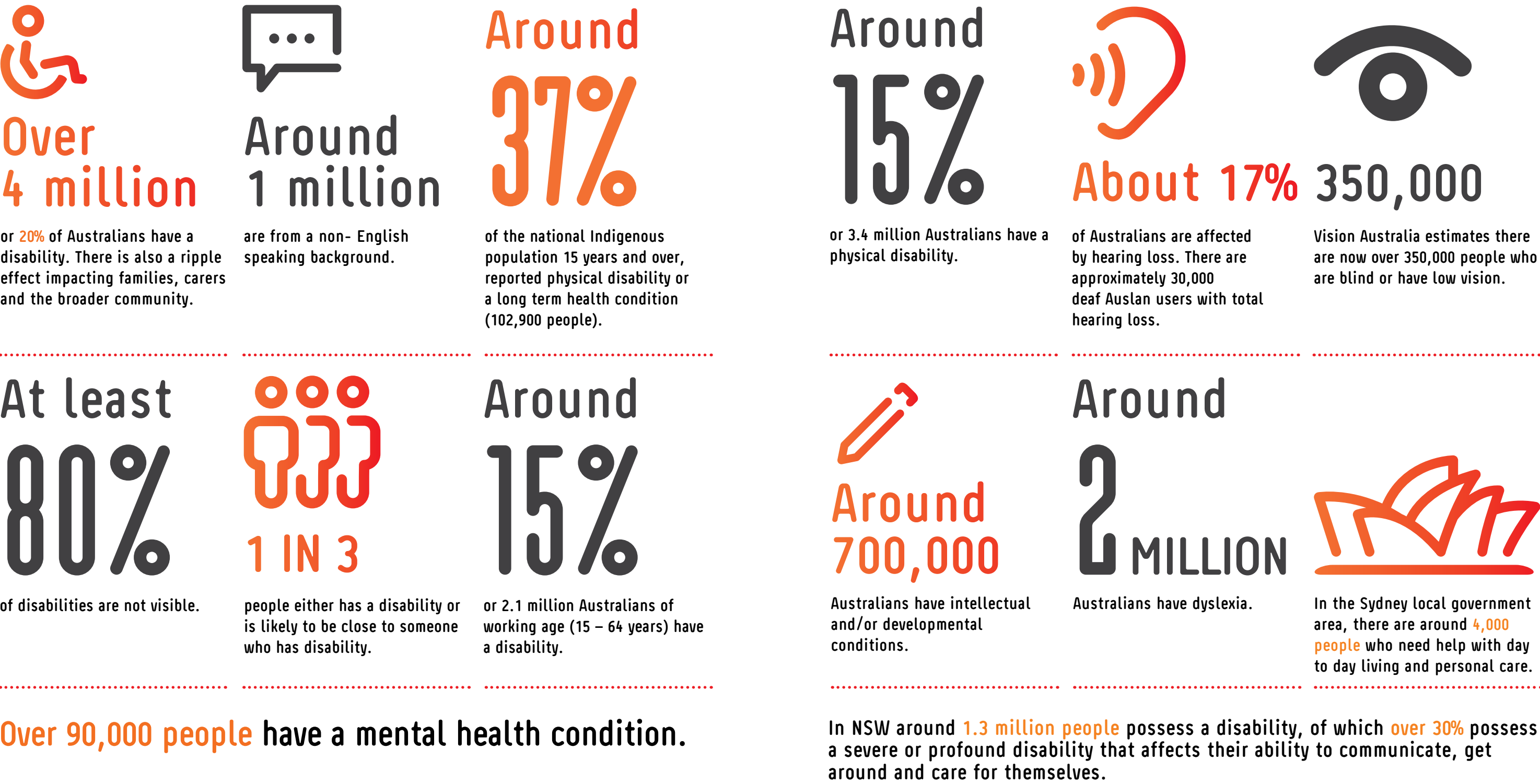
These demographic factors have significant implications for how we design and build future urban communities, and how those spaces can support more inclusive workplace cultures.

Urban regeneration developments in particular, will need to be far more amenable to a more diverse workforce and be more universally configured to facilitate broader sourcing of workforce productivity.

Integrating accessibility and inclusion principles at the early stages of design and masterplanning of developments should therefore be an essential step, shifting away from solely compliance-driven approaches and the often, more expensive retro-fitting solutions implemented as an afterthought, during later stages of development.

It also makes good business sense to attract as many people as possible to those developments. Thriving people places reinforce stronger rental income streams and asset values, and an overall competitive advantage for the developer and asset owner.

SUMMARY SNAPSHOT



IN AUSTRALIA, THERE ARE A RANGE²⁴ OF FEDERAL AND STATE LEGISLATION AND POLICIES IN PLACE GOVERNING THE RIGHTS OF PEOPLE WITH A DISABILITY.

DISABILITY RIGHTS FRAMEWORKS

The UN Convention on the Rights of Persons with Disabilities (2008) is the global foundation for setting out the rights of people with a disability, which has been integrated into Australian legislation. It comprises general a number of principles including respect for inherent dignity, individual autonomy and full and effective participation and inclusion in society.

In Australia, there are a range of federal and state legislation and policies in place governing the rights of people with a disability. The Commonwealth Disability Discrimination Act 1992 Cth (DDA) and state legislation such as the Anti-Discrimination Act 1977 NSW, are two key laws recognising the rights of people with disability to be treated equally before the law and making it unlawful to discriminate on the grounds of a person's disability.

Standards arising from the DDA, have been systematically developed, including for education, transport and premises. For the built environment – the Disability (Access to Premises – Buildings) Standards 2010 (Access Code) has Australian Standard 1428.1 as the centerpiece.

Key objectives are to:

- (a) to ensure that dignified, equitable, cost-effective and reasonably achievable access to buildings, and facilities and services within buildings, is provided for people with a disability; and

- (b) to give certainty to building certifiers, building developers and building managers that, if access to buildings is provided in accordance with these Standards, the provision of that access, to the extent covered by these Standards, will not be unlawful under the Act.

BUILDING CODE OF AUSTRALIA

The Building Code of Australia (BCA) also sets out how to provide safe, equitable and dignified access to buildings, and facilities and services within buildings nationally.

The key focus is on the physical construction of the building or new additions or upgrades to an existing building. Compliance with the BCA is triggered at the application for building construction approval and, since May 2011, has formally included a number of access related Australian Standards.

Beyond construction, aspects such as fitout and ongoing use and management, are not covered by the BCA, but continue to be covered by discrimination law (i.e. DDA).

AUSTRALIAN STANDARDS

In addition, there is a range of Australian Standards to consider which are technical and prescriptive. The BCA details references to these standards.

- AS1428.1 Design for access and mobility: General requirements for access – New building work
- AS 1428.2 Enhanced and additional requirements for access – building and facilities
- AS 1428.3 Requirements for children and adolescents with physical disabilities

- AS 1428.4 Means to assist the orientation of people with vision impairment – Tactile ground surface indicators (TGSi)
- AS 1428.5 Communication for people who are deaf or hard of hearing
- AS 2890.6 Parking Facilities
- AS/NZS 2980.6 Off-street parking for people with disabilities
- AS 1735.12 Lifts, Escalators and Moving Walkways

DESIGNING FOR DIGNITY

The Access Standards provide the minimum requirements that must be met so that a particular design is “deemed to satisfy” the goals and guidelines of the Building Code in relation to accessibility. The Building Code also provides that “Alternate Solutions” can be presented that achieve the goals and guidelines of the Building Code.

So, what are the goals of the Building Code of Australia in relation to accessibility?

The accessibility objectives are to:

- (a) provide, as far as is reasonable, people with safe, equitable and dignified access to—
 - (i) a building; and
 - (ii) the services and facilities within a building; and
- (b) safeguard occupants from illness or injury while evacuating in an emergency.

Methodologies for ensuring people have independent and equitable access have existed for many years and are variously called “Universal Design” or “Inclusive Design”. The principle behind these methods is that designs are developed considering the way in which a wide audience of different abilities would use it. It prompts questions such as:

Who is left out if I design it this way?

What is the cost of re-working my design if customer needs change?

What physical or sensory ability is required to use the design?

How do I change the design to include more people?

The main Australian Standard (AS1428.1) is designed to allow general use of buildings and facilities by people with disability. It does however have some limitations:

- Based on data representing people aged between 18 and 60 years
- The dimensions of wheelchair and user contemplated by the standard represent 80% of users (90% in critical access areas)
- The majority of measurements in the most critical areas are based on data from 1983
- Motorised scooters are not included in the requirements. The Australian Bureau of Statistics, Survey of Ageing Disability and Carers report of 2012 states there are 42,000 motorised scooter users in Australia.

CASE STUDY: APPROACH TO STAKEHOLDER ENGAGEMENT AT BARANGAROO SOUTH

Actively thinking about the access needs of the community and how to provide dignified and independent access has driven Lend Lease, Westpac Group and Australian Network on Disability to collaborate on this Guide.

A key aspiration of the social strategy at Barangaroo South, is to promote inclusivity and equity of access for all.

As a first step, focusing on the design response for the project, the Australian Network on Disability (AND) was engaged to assist Lend Lease in facilitating a shared understanding of where exemplary access and inclusion for people with disability could be realised.

AND, Westpac Group and Lendlease collaborated on Barangaroo South to:

- Review the Public Domain design considering the needs of people with disability
- Run workshops internally with Lendlease Building project managers and then separately with tenants such as Westpac on designing for dignity not just compliance with standards
- Assist in internal review of the International Towers Sydney base building towers
- Conduct a series of facilitated stakeholder dialogues with a cross-section of external stakeholders in the community with disability to identify common areas of frustration and obtain feedback on design elements.

The objectives of these sessions have been to:

- Build shared understanding of the diverse aspects of disability, with an emphasis on treating people with a disability with equity, and dignity
- Focus on the functional impediments that arise from the various types of disability and identify potential design responses that go ‘beyond’ the standard DDA compliance.
- Build connections with disability advocates

These dialogues have informed the Guidelines as part of the Barangaroo South Accessibility and Inclusion Plan, a strategic framework by Lend Lease that outlines the Project's commitment to inclusion of people with a disability.

TIPS FOR DESIGNERS – CONSULTING PEOPLE WITH DISABILITY

Inclusive design can be complex and the impacts across disability groups can be quite varied and at times conflicting. For example, tactile markers might be beneficial to someone without vision, but can be a nuisance for those in a wheelchair.

There will not be one straightforward solution, so it is important to manage stakeholder expectations. Even so, taking a participatory approach enables stakeholders to exercise their citizenship, by appreciating the issues and complexities first hand and have their voice listened to on their own terms when exploring inclusive solutions.

The Disability Council of NSW recommends the following tactical tips for facilitating the engagement process.

- Ensure there is a balanced cross-section of representation from the disability community
- Develop an agreed engagement protocol in collaboration with key stakeholders
- Ensure appropriate advance notice of engagement, sessions, outlining agenda, objectives and outcomes
- Provide flexibility to enable stakeholders to contribute to agenda setting
- Check to ensure engagement information is communicated in accessible formats that meet the needs of all key stakeholders (eg Braille, Auslan, Easy English)
- Be clear about engagement boundaries, process and timings and manage expectations sensitively
- Avoid overly large consultation groups as it will limit ability for all voices to be heard
- Ensure the venue for engagement session is appropriately accessible and can accommodate carers if necessary
- Ensure appropriate length of time is allocated to discussions
- Ensure facilitator is culturally competent to run the engagement process
- Check if additional communication formats are needed during facilitated sessions (eg signing)
- Actively listen with a demonstrably open mind and frame understanding of issues without 'ableist' bias
- Close the loop on engagement by ensuring appropriate and timely follow up of findings and next steps
- Follow through on agreed actions and use accessible technologies for stakeholder feedback



2

FUNCTIONAL ELEMENTS OF DIGNIFIED ACCESS

This guide does not seek to replace the BCA or Access Standards. It is intended to guide designers with 'beyond compliance' principles and considerations that will make their designs accessible to more people, in a dignified, equitable way.



GETTING THERE

There is a clear path of travel (clear, flat and unobstructed) from the street to a main entrance when travelling/arriving in a variety of ways:

- By foot
- By car – from an accessible parking space
- By taxi
- By mobility scooter (which is not covered in the standards)
- There is passing space for two wheelchair users

Whilst another party might be responsible for the path of travel, it impacts your design. Be proactive in highlighting and advocating clear access to your destination.

Travel from each access point to your destination: Is it flat? Are there kerb cuts on both side of the road? Are there obstacles overhead? How would you travel if you were a wheelchair user or had a walking frame? If you could not see, are there unmarked obstacles on the path?



Why does it matter?

Equitable access means that you can expect to arrive at the destination in the same way as the party you are travelling with.

It means that you do not need someone with you just to deal with an unintended barrier in your design.



GUIDANCE

Clear and legible signage allowing people to find their way directly to their destination:

- Signage from access points
- Floor occupancy signage is accessible/legible (Large font with high contrast letters)
- The lift must be clearly signposted from the building entry, including Braille and tactile indicators
- Raised lettering or braille assistance on the path of travel not off the path in the bushes.

In more complicated areas, tactile wayfinding can assist people with vision impairment to find your location. This could take the form of raised lettering on handrails, three dimensional dioramas or more simple tactile maps. It can also assist people who are experiencing more difficulty in orienting two dimensional maps.



Why does it matter?

With an ageing population, clear signage benefits an increasing number of people. Clear signage allows people to independently and confidently find their location without getting lost or delayed.



ENTRANCES

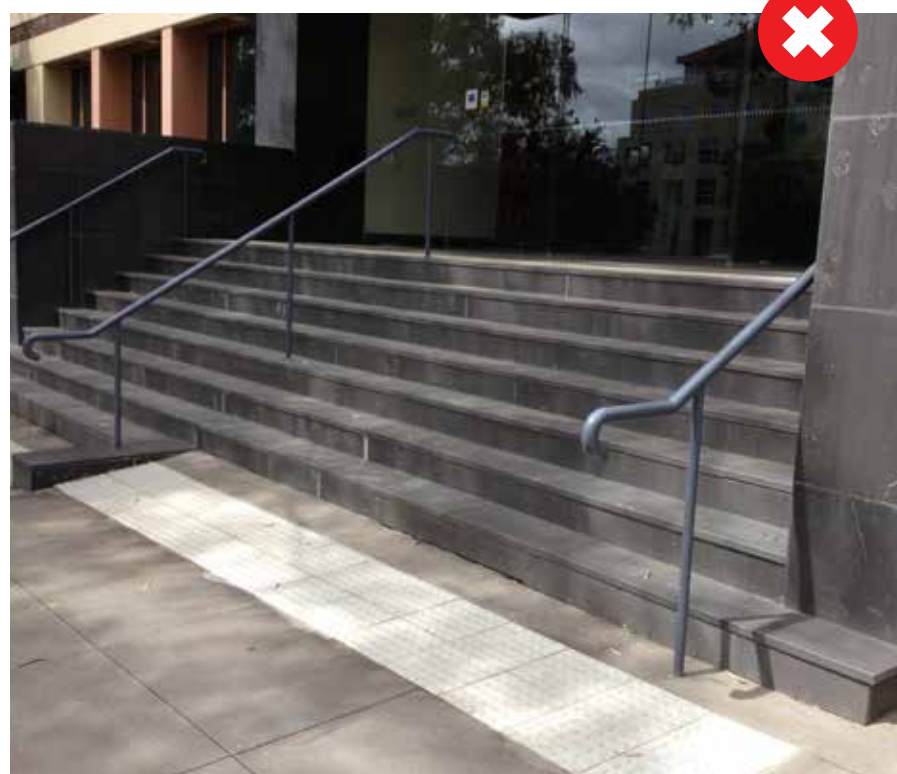
The main entrance and path of travel to your destination is accessible to all employees, visitors and clients. This means:

- It can be navigated easily and directly without a step, stairway, turnstile, revolving door, escalator or moving walkway
- If there are several entrances and one entrance is not accessible, there are clear directions to an accessible entrance
- Dignified, accessible entrances are mainstream entrances, not through loading docks or goods lifts or retro-fitted solutions

Why does it matter?

An accessible entrance to the building ensures that your employees, public or customers can access your place or work or shop.

Dignified access means that the employee or customer can do that on the same basis as colleagues and other shoppers. It also means that person can do it independently.



WAYFINDING

All employees, visitors and clients are able to independently (as appropriate) find their way around the office space to different key locations:

- Way finding assistance is provided by way of TGSIs paths, or other Braille, tactile signs or way finding techniques
- TGSIs are used consistently and logically
- The general lighting inside is suitable for the use of the space
- Pathways are free from obstruction
- Additional guidance - new staff are briefed and provided wayfinding tours
- Offices and meeting rooms are laid out in a consistent way across floors and have tactile information indicating the name or room number
- Do the colours in the carpets / floor surfaces create difficult to navigate patterns or change depth perceptions?

Why does it matter?

For a person who is blind or has low vision, wayfinding assistance enables full and independent travel around the premises.

Consistent layouts also mean your meetings are more likely to start on time.



RECEPTION

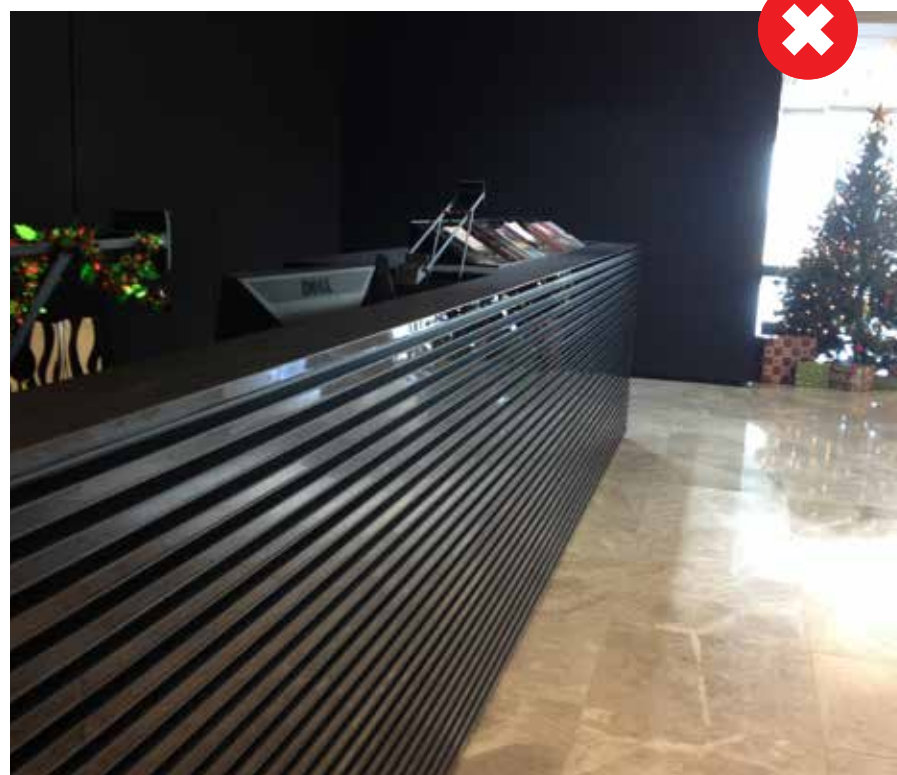
All employees, visitors and clients can equitably access the reception area and communicate with the receptionist:

- Audio augmentation in reception area
- Reception 'desk' design and height. Is the reception desk a barrier to an employee working in the role of receptionist and also to any employee, visitor or client wanting to use the space and communicate with the receptionist?
- No AV screens behind reception which otherwise makes lip reading more difficult
- Can all visitors easily sign in?
- Can everyone access and pass through any security gates?
- Any TV programming has captioning in the reception area
- Chairs have arms to provide support moving in and out of the chairs
- Chairs have space underneath the chair to allow a person to place their feet underneath the chair to assist in standing
- Floor design: do the colours in the carpets / floor surfaces create difficult to navigate patterns or change depth perceptions?
- Additional guidance: receptionist is trained in welcoming clients with disability

Why does it matter?

The reception desk is often a visitor or customer's first physical experience of your company or brand.

Being able to independently 'check-in' enables and empowers people.



LIFTS

Early engagement in lift design is the key. Take time to understand how you would get to your location if you were blind and unable to perceive the directions to the lift or see which floor you had reached. This is especially true where you have a programmed lift arrival system.

- Lift cars wait for slower travellers
- At the ground floor, if there is a floor number selector key pad, the floor selection is also audio announced for the user
- There are sufficient directions from the keypad to the lift well
- The lift car audio announces (bell, sound or "car A has arrived") at the ground level as well as a visual cue
- There is an audio and visual announcement when you arrive at each floor
- The standard Braille emergency call buttons are at an accessible height from a seated position
- What is the user experience if the user misses the lift car?
- Individual regular users can have their swipe card programmed to always have the same lift car.

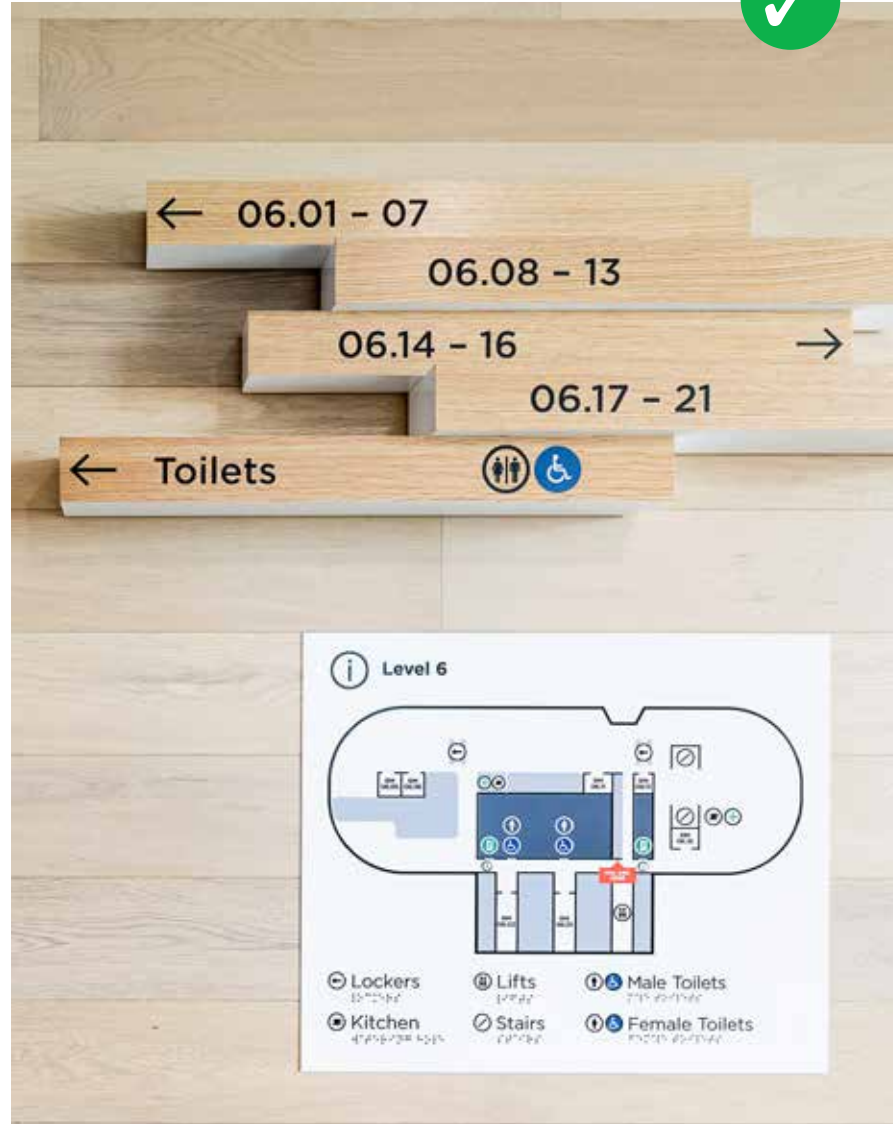
Dignified lift access is intuitive and able to be accessed whether you move slowly, cannot see the instructions, or cannot hear the instructions.

Why does it matter?

Dignified, equitable access means that you can travel independently to a location without a guide or helping hand.

Not having accessible lifts means organizing alternatives for people, either meeting in the foyer or missing out on business if you supply goods and services.



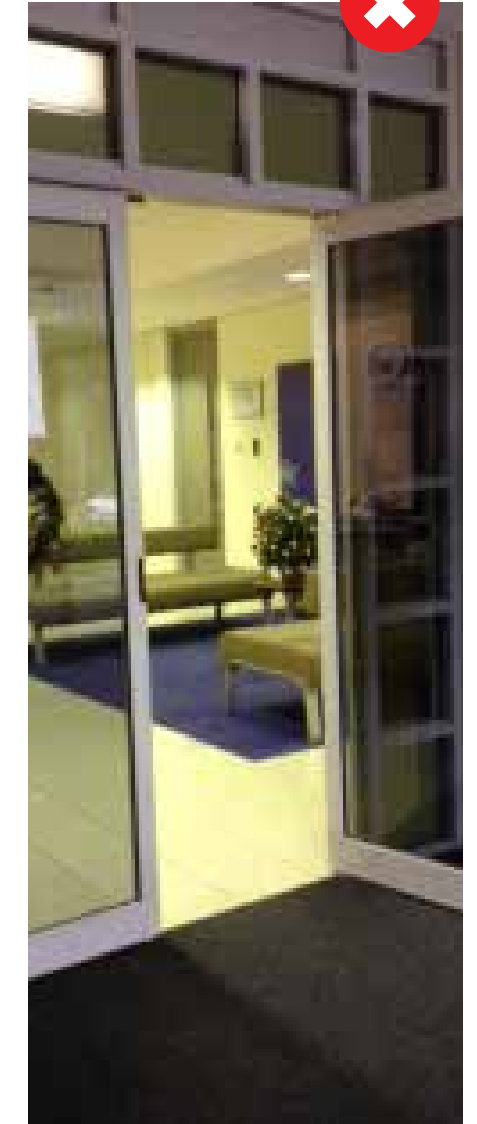


Why does it matter?

The greatest challenge in your job should be producing your best work on time and budget. It shouldn't be getting through the door.

ACCESSING OFFICE FLOORS

- Do the colours in the carpets or floor surfaces create difficult to navigate patterns or change depth perceptions? High contrast chevron patterns for example can create the perception of "waves" in the floor surface
- Doors are accessible to all employees, visitors and clients.
- If there is access to the floor using a wall phone can the phone and phone list be accessed from a seated position?
- Dignified access is best achieved with auto-opening doors. If the doors are swipe operated consideration to door swing, button / swipe location and after hours access are all included in the design.



DOORS

Doors are accessible to all employees, visitors and clients. Automated doors work best. Glass doors should have a contrasting strip across the full width of the door.

Can the door be opened independently by a person with limited strength or mobility (for example a wheelchair user, or a team member who is using crutches after a sporting accident)?

BCA requires only 20 Newtons force (only about 2 kg) to open a door, but poor hydraulic door closer settings mean that this is frequently not achieved and can be too heavy to open.

Other considerations:

- Door handle that will not allow a person's hand to slip off the handle, eg. 'D' shaped handle
- Room between the door handle and wall on sliding doors
- Lock snibs that are large enough to grip
- Standards dictate the width of the clear opening. Can a person using a mobility scooter easily pass through the door with turning space inside the room/area?
- The standards also illustrate the necessary space outside doorways to provide good access
- This will depend on which way the door opens and the directions people approach the door. This is a common failure when offices are "re-stacked" or re-designed

Why does it matter?

Easy access also assists people carrying things or people with temporary mobility restrictions.

Access Standards aim to include 90% of the population when it comes to door widths, but does not recognize the prevalence of motorised scooters or the growth in size of electric wheelchairs since 1983.

Dignified access through doorways means that people with limited dexterity or strength through their fingers, hands and arms are able to operate the door controls.

Internal door locks are rarely installed correctly to Standards (usually they are too small and hard to grip).



STEPS AND STAIRWAYS

All spaces accessed by steps or stairs can also be accessed using an alternate path of travel which is also near to the stairs - for example, a ramp or a lift.

Many modern offices now utilise internal stairs to improve the feel of connectivity and encourage people to move. Whilst lifts are also available, the stairs need to be functional and safe.

Is there signage for the alternate accessible path of travel displayed at the steps/stairs?

Stairway handrails provide a safe user experience with:

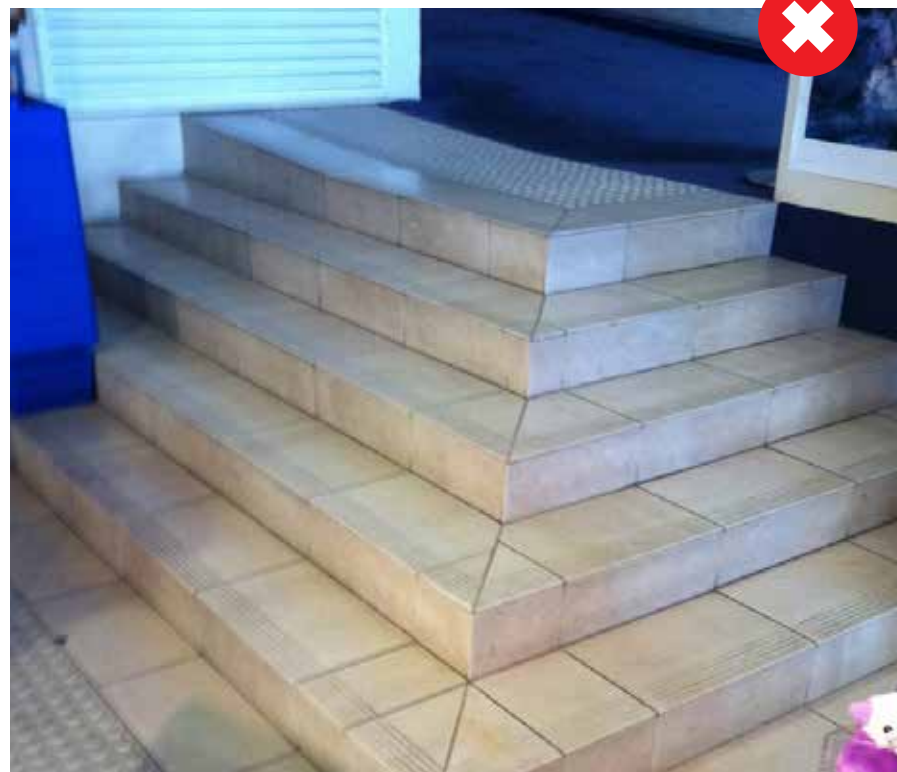
- Handrails on both sides and no vertical sections
- Handrails are smooth and have the same height as you go up or down the stairs
- Extend as per the Standards beyond the last riser (or step) at the top and bottom indicator on handrail, to tell you which floor you have reached

Stairs can be used by all employees, visitors and clients:

- All stairs have opaque risers
- Stairs have non-slip contrasting strip across the width of the stair
- Nosing does not protrude beyond the 'face' of the riser, as this creates a trip hazard, especially for those with prosthetic limbs
- Tactile Ground Surface Indicators (TGSIs) are applied according to the standards on the head and foot of internal stairs

Why does it matter?

People with a disability should also be able to use the stairs in a safe and dignified way.

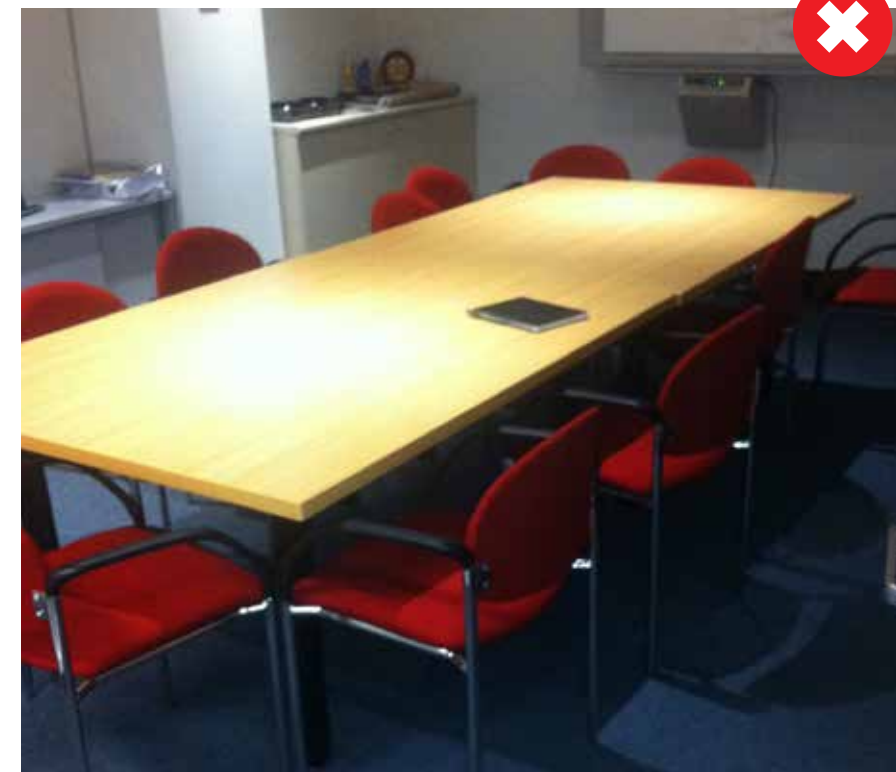


MEETING ROOMS AND COLLABORATION SPACES

Providing your employees, visitors and clients with the facilities to be able to have a meeting at an appropriate and dignified venue/room that is suitable for the purpose of that meeting.

All meeting rooms/spaces are accessible to all employees, visitors and clients:

- Tables and chairs are adjustable
- Meetings rooms/space offer an area which is quiet and free from distraction
- Clear space around meeting room table for mobility devices
- Hearing augmentation systems in larger meeting rooms
- Portable hearing augmentation for smaller rooms on request
- International sign for deafness indicating hearing augmentation
- Lighting (natural and artificial) is designed to provide high levels of even illumination without creating glare and reflections
- Consider how employees, visitors and clients interact with the space and what they may need to use/ access - for example, technology, power points and screens



Why does it matter?

Teams work best when everyone can contribute.

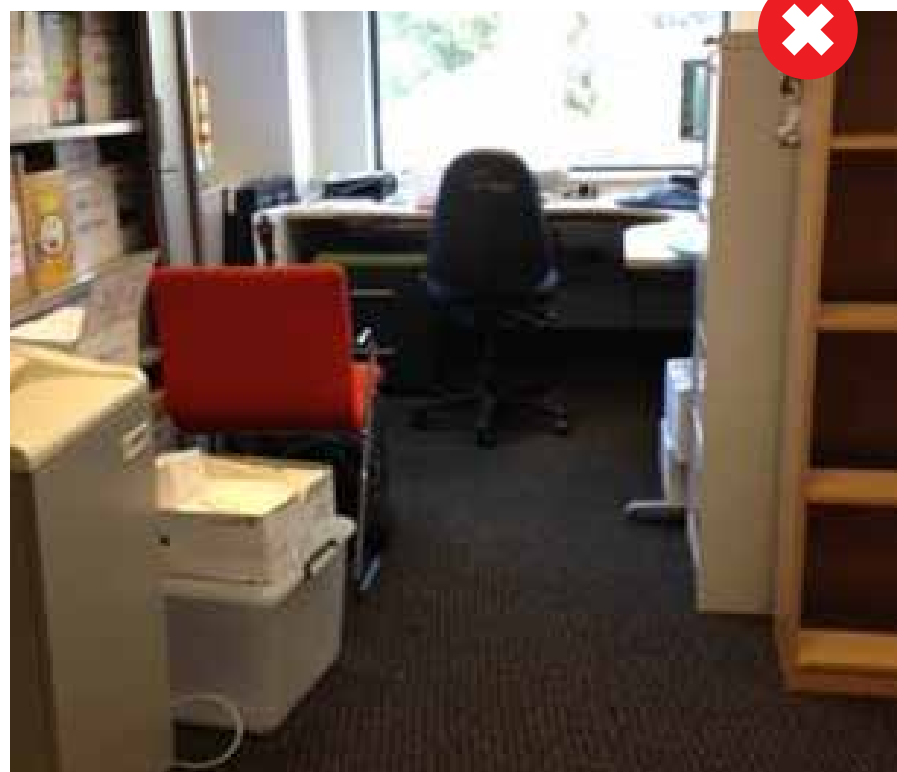
These spaces need to accommodate the whole team – now and in the future.



WORKSTATIONS

All employees, visitors or clients are able to easily work at any workstation at any time.

- Adjustable ergonomic chairs
- Adjustable desks
- Adequate lighting for the work being undertaken
- Unobstructed path of travel to/from the workstation
- Sufficient and appropriate desk space and depth
- Computer height is adjustable
- Ease of use of equipment such as desk phone and power points



Why does it matter?

As workplaces becomes more flexible the work area itself needs to accommodate different people more easily. It is easier to invest up front in flexible workspaces than to retrofit later.

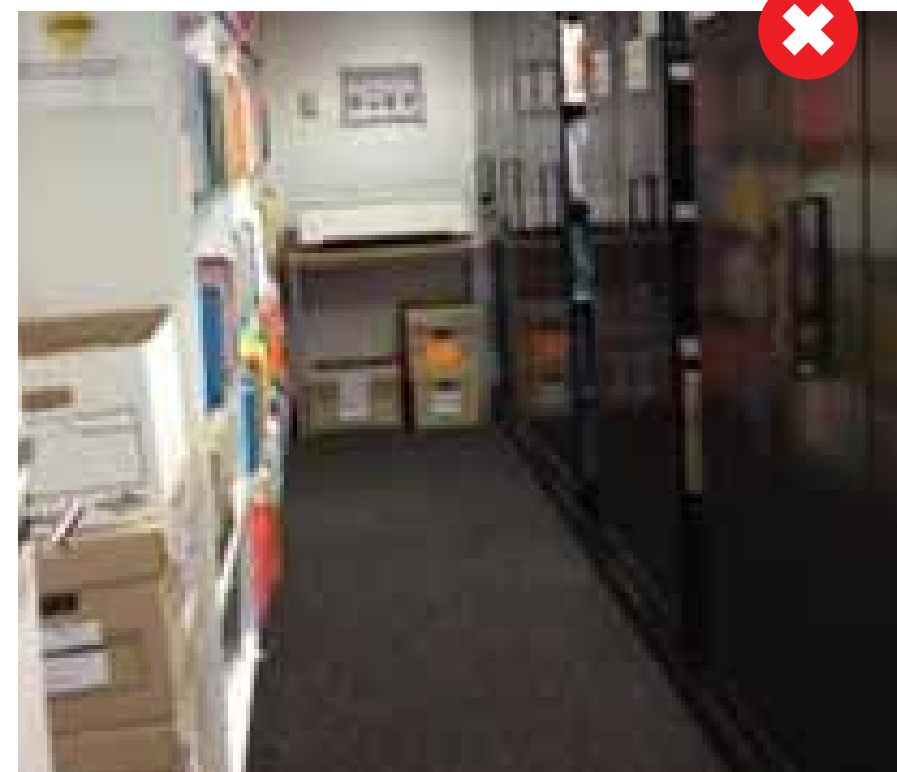


STORAGE AND UTILITIES

Centralised storage and utilities spaces need to be accessible to all, but frequently become a destination for bins, spare equipment and goods in transit.

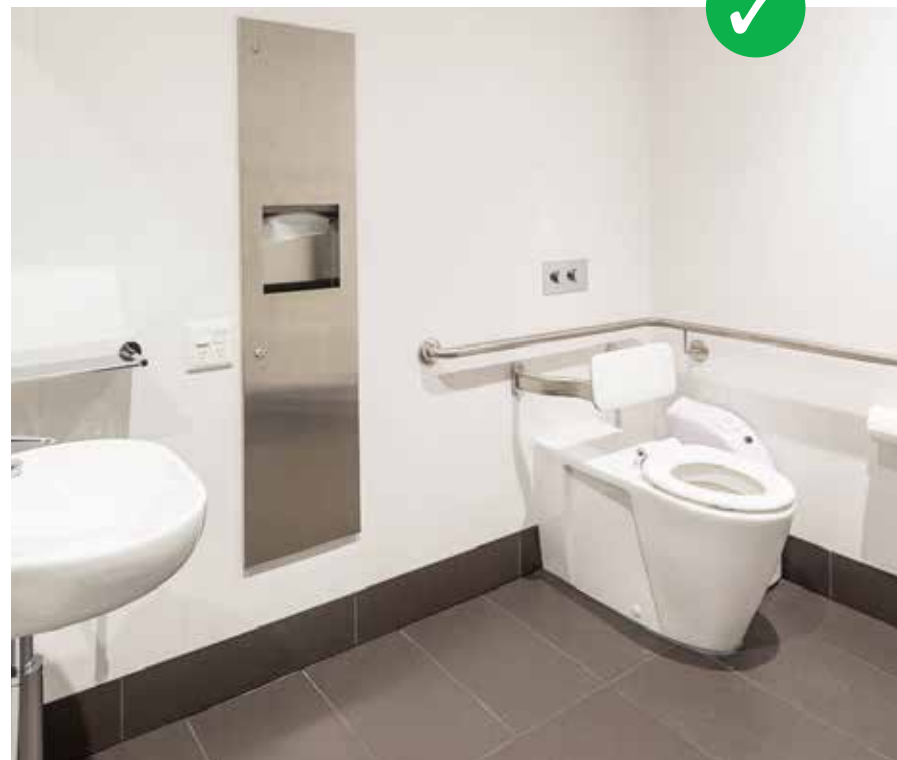
- Circulation space within storage / utility space allows everyone to access equipment
- Height of, and access to, printer and fax machine is accessible from a seated position
- Screens of printer and fax machines are angled towards the user
- Storage height of commonly used objects is accessible to everyone
- Filing cabinets/storage for files are accessible to everyone and compact uses are not utilised

Additional guidance: dignified access will work at its best when there is a Workplace Adjustments Policy and Procedure in place for adjusting the workplace and technologies for employees, visitors and clients with disability. Refer to www.and.org.au



Why does it matter?

Cluttered spaces are a significant source of 'slip, trip and fall' injuries as well as back strain, when moving objects out of the way.



ACCESSIBLE TOILETS

Convenient and equitable access to the accessible toilet/bathroom that can accommodate a carer and is intuitive to use. The Standards are very clear on how an accessible toilet / bathroom should be created.

- Signage directing people to the accessible toilets
- Door pressure; standards require only 20 Newtons force (only about 2 kg) to open a door, but door hydraulic door closers mean that this is rarely achieved and toilet doors can be too heavy to open
- Internal door locks are almost never installed correctly to standards (usually they are too small and hard to grip)
- 'D' shaped door handles
- Transition space (on and off the toilet itself) is sufficient
- Circulation space
- Reach from the toilet
 - Toilet roll holder within reach
 - Hand rails correctly installed
 - Flushing mechanism within reach
 - Appropriate back rest on toilet
- Area for wheelchair user underneath sink
- Space on/next to sink to place personal items
- Lever taps on the side
- Consider mirror: tilt and size
- Access to soap dispenser/hand towels
- Hooks or other device for hanging/storing clothes at an appropriate height for all users

Other things to consider:

- An accessible toilet on each floor is the ideal situation for the dignity and convenience of all
- Emergency button that links to reception
- Accessible toilets should only used by employees, visitors or clients that need to use the accessible toilet
- Consider adding swipe access only for those employees who require use. Client or visitor toilets should be accessible to all
- If there are shower facilities available, are there also showers and changing facilities that are accessible as well?



Why does it matter?

Accessible toilets are typically not implemented well. Compliance is barely met/poorly interpreted and access is not dignified and would require assistance in some cases.

For people who can only use the accessible bathroom, having to queue or wait for someone to provide access with other 'options' is frustrating and undignified.



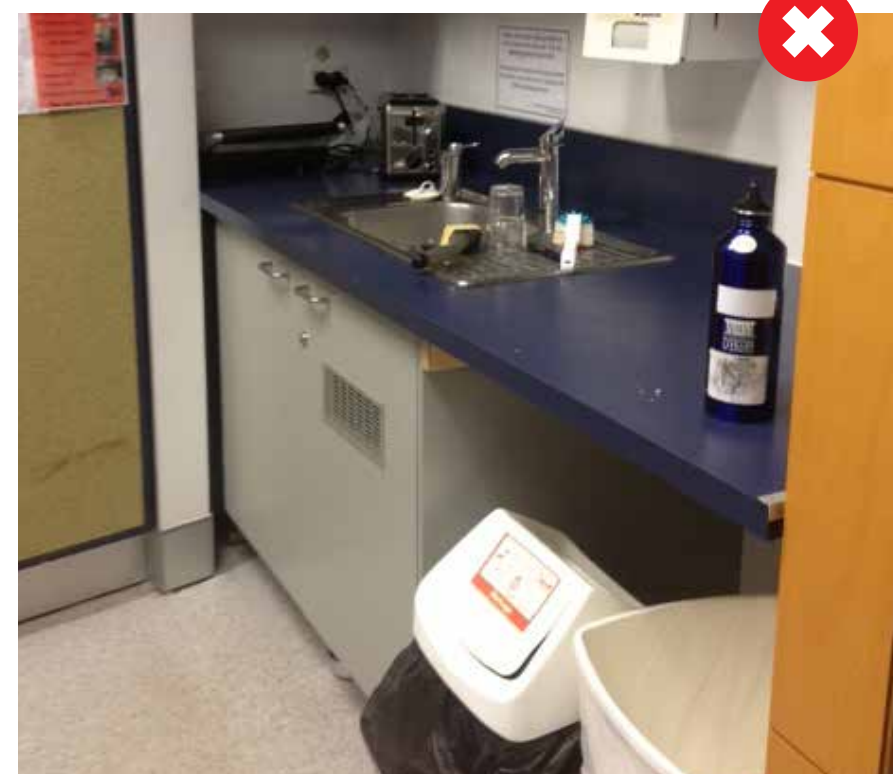
KITCHENS IN THE OFFICE

Being able to use the kitchen facilities independently:

- The tap handles are lever style handles
- Taps are located to the sides of the sink
- The sink has space cut away underneath it for access by a wheelchair user
- There is a mixture of seating heights and styles (including chairs with arms)
- There is a mixture of bench and table heights
- Access to microwave and appliances is possible from a seated position
- Access to refrigerator taking into account direction of door swing relative to approach and wall
- Access to crockery and cutlery is possible for everyone
- Non-slip floor
- Vending machine buttons within reach
- Accessible water fountains/bubblers
- Access to use the rubbish bins
- Consistent layout on each floor

Why does it matter?

Equitable access to basic amenities in the course of a work day not only provides a sense of inclusion and belonging with colleagues and teams, but also independence that enhances an individual's professional productivity and psychological wellbeing.





EVACUATION

Appropriate and dignified structures and processes need to be put in place to ensure all employees, visitors and clients can evacuate in an emergency:

- A person with a disability should be able to evacuate in a dignified way for example if:
 - there is enough space in the evacuation stairwell for a wheelchair user to wait and for people to pass by, and/or
 - a person with mobility impairment has a strategy in place to exit the building in a dignified way such as using an evacuation sling or chair
- All emergency exits should be clearly shown using illuminated exit signs
- All emergency and evacuation procedures should be clearly displayed on appropriate signage
- Evacuation warnings are both auditory and visible. This is especially important in bathrooms, prayer rooms, medical/rest rooms or areas where employees, visitors and clients may be alone

Additional guidance: Personal Emergency Evacuation Plan (PEEP). A PEEP should be in place for any person with disability requiring assistance to leave the building. These needs may not be just physical – some people with anxiety-related conditions may also need assistance.

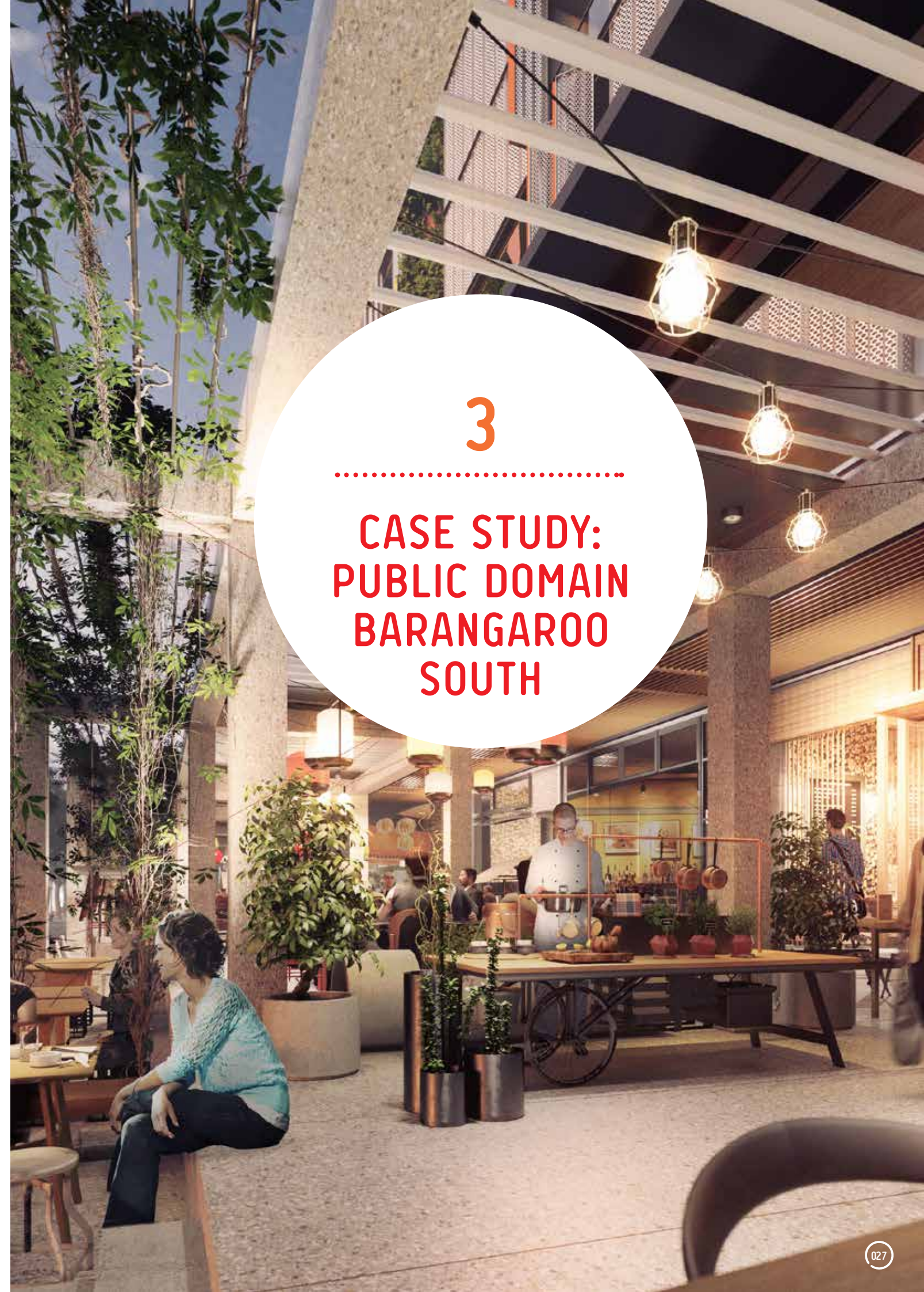
Why does it matter?

Evacuating safely can be a matter of life and death.

Everyone has the right to certainty about how evacuations will occur and to feel safe in their workplace.

3

CASE STUDY: PUBLIC DOMAIN BARANGAROO SOUTH



STAKEHOLDER FEEDBACK ON PROPOSED DESIGN OF THE PUBLIC DOMAIN

THE DEVELOPMENT OF BARANGAROO SOUTH WILL SEE THE CREATION OF OVER 490,000 M2 OF NEW COMMERCIAL, RESIDENTIAL, RETAIL, COMMUNITY AND HOTEL FLOORSPEACE, , SPREAD OVER A 7.8 HA SITE. AROUND 52% OF THE SITE WILL COMPRISE HIGH QUALITY PUBLIC SPACE, INCLUDING WATERFRONT SQUARE AND HARBOURSIDE WALKWAYS.

Consultation with a cross-section of people from various disability groups was held to test the design of the public spaces of Barangaroo South, and obtain insights into the lived experience of disability. The exchange of ideas and experiences has enhanced the design of the precinct to increase accessibility awareness for the Barangaroo project. In addition we have begun the process of post occupancy evaluations to continue to refine the experience for all.

The key principle is to think about all disabilities when designing. Follow simple principles to ensure adequate clearance for ease of movement, consistent alignment of objects, consistency in general, and simplicity of layout.

The principles and issues below have been used to guide the design of public spaces to increase inclusion and ensure the needs of people with disability are met. This led to small redesigns and a focus on high quality construction and installation.

CONTINUOUS ACCESSIBLE PATHS OF TRAVEL

Proposed: Walks and lanes, path through each tower, and waterfront promenade.

General design :

- Straight lines and continuous lines are best for directional movement. This does not mean designs cannot curve or step but attention to how someone with a mobility impairment or depth perception problem navigates the space needs to be thought through.
- People who have perceptual problems (cannot judge distance) will need cues for depth (eg colour strips, contrast).
- Ensure all people (incl. people in wheelchairs) can access lawns and other public spaces.
- If doing mounds or other areas with slope, ensure the surface allows an adequate amount of grip.
- Maintenance is important. For example:
 - Wet leaves in autumn could pose a slip hazard.
 - Cracks or small level changes from poor installation in footpaths could pose a risk for wheelchairs and people with a mobility impairment.
- Construction Detailing is important:
 - Junctions with precast concrete – pose a trip risk if too big, and will be very uncomfortable for people traversing in wheelchairs.
 - Timber boardwalk details need to address how the timber will age and settle, potentially creating trip hazards.

PARKING

Proposed: taxi ranks and parking in basement for residents, commercial and visitors

- Accessible parking spots with enough safe clearance on the driver's side. Some people keep their wheelchair behind the driver's side seat, so require some space to safely remove the wheelchair.
- Accessible parking underground or in shopping centres can be tricky as the columns sometimes block the ability to access their wheelchair. Provide parking spots away from columns if possible.
- Distance travelled from accessible parking spots to lift / destination needs to be the shortest, most direct route possible.

TACTILE GROUND SURFACE INDICATORS (TGSIs) AND BOLLARDS

- Tactile markers might be beneficial to someone without vision, but can be a uncomfortable for those in a wheelchair.
- Use of textures and TGSIs are really important for visually impaired to get around and navigate.
- TGSIs are recommended for road crossings.
- Bollards can create hazards for people in wheelchairs.
- The distance between bollards need to be wide enough to allow a motorized wheelchair to pass.

SIGNAGE AND WAYFINDING

Proposed: signage for key areas - a mix of digital, standard signage, audio.

General

- There are no wayfinding requirements in the Australian Standards, other than TGSIs.
- When signs or reflective strips are required to tell you how to use something, then there is a fundamental design problem.
- Directional cues are very important.
- Wayfinding signage as well as the Barangaroo site website should provide audio options for vision impaired visitors to site.
- Signage should be appropriately lit .

Wayfinding signage

- Vertical is best for wheelchair users with an angled screen facing towards the standing reader at the appropriate height.
- People with vision impairment appreciate audio and navigational tools, but some do not personally use a smart phone to find their way around.
- People with visual impairment often rely on being given clear directions, so clearly identified addresses and landmarks are important .
- Signage needs to clearly identify each of the three towers / buildings. People with vision impairment need touch screens in lifts to talk so as to understand what level or direction they are heading.
- A 3D model or raised map at key entries to site would allow someone with a vision impairment to understand the layout of the site better and get their bearings.

- Ensure collaboration with appropriate organisations for the visually impaired such as Vision Australia and Guide Dogs Association to promote familiarity with the Barangaroo South site.

STREET FURNITURE - SEATING, BINS, BUBBLERS

Proposed: street furniture is located through the streets, waterfront and in key public spaces.

- Bins should have a simple method of communicating their use, such as indicators with raised shapes.
- Bins are extremely difficult to use, and it can be very difficult to tell the difference between general waste and recycling without some form of differentiation.
- Rubbish bins - ensure hood design allows easy access for people in wheelchairs to put rubbish in.
- If possible, lowered lids are better for access. In addition, clear signage to be on front of bin not on top of bin.
- Bubbler –ensure bubblers are aligned so that they do not stick into paths of travel or present a trip hazard.
- Water filling stations are very useful.
- Water filling station 'tap' to be a push button or lever, as a spring loaded tap is very hard to turn for people with poor dexterity.

SEATING

- Seating should be designed in a consistent manner. As a rule of thumb, there should be a seat every 60 metres.
- Bench seats that line up with the trees on the waterfront makes them easier to find.

- Clustering all street furniture together is also easier to navigate.
- It is also recommended that bench seating has arm rests at the ends as this is a good way of knowing you have reached a seat. It also makes it easier for someone to pivot from wheelchair to bench seat.
- Avoid arm rests that are too wide, as the hand cannot get purchase, and slip down due to downward slope. Poorly designed arm rests can be especially difficult for someone with arthritis.
- One-arm benches are acceptable, but there needs to be room to park a scooter or wheelchair at the end of the bench.
- If creating an outdoor amphitheatre / stepped seating area, ensure the wheelchair area is easy to access, easy to exit and allows partners/friends who are not mobility impaired in wheelchairs to also sit with them. Ensure there are good sightlines.
- Convene focus groups with older people as seating is a priority for them. Consider 'village-style' seating back to back, facing each other to talk, not just for resting. Avoid colour contrast with all furniture especially against the dark paving.

AMBIENCE AND LIGHTING

- Public Art soundscapes can generate levels of noise that can be a deterrent and be very confusing for people who are vision impaired, who rely on sound for navigation.
- Luminosity, lighting, shadows etc need to be considered – there should be 45% luminous contrast.

- Spot lighting with shadows and glare pose a challenge for people with visual impairment. For some people with dementia, for example, criss-cross shadows look like stops whilst other shadows look like water.
- Daytime lighting is needed, as well as for nighttime for signage boards, etc.

PUBLIC AMENITIES

- Public toilets should have a simple way of indicating if they are being used. Some toilets have systems that are difficult for the elderly who are not sure how to lock the door.
- Ensure an appropriate distance to toilets: bladder control can be an issue.
- Public toilets need to be identifiable for users in a way other than colour (green/red) due to colour blindness.
- Double doors are needed for those accessing toilets in wheelchairs, or twin strollers.

COLUMNS AND OVERHEAD ELEMENTS

Carefully review any elements that protrude at head height such as sloping columns, or protruding elements such as signage. People with vision impairment can easily walk into a column or sign if there is no warning through tactiles or other measures.

4

CASE STUDY: COMMERCIAL, BARANGAROO SOUTH

CASE STUDY: PRINCIPLES FOR SAFE EQUITABLE, DIGNIFIED ACCESS TO PROPOSED COMMERCIAL SPACE - R7

THE FOLLOWING IS A SUMMARY FEEDBACK OF PERSPECTIVES ABOUT ACCESSING AND UTILISING AMENITIES IN 'R7', WHICH IS A PROPOSED MIXED USE COMMERCIAL SPACE TO BE LOCATED AT EXCHANGE PLACE.

It is likely building users will be there to access retail services, potentially gyms, health or restaurants. People may be regular visitors who will establish a path of travel. For infrequent / once-off visitors intuitive entry, navigation and exit will be important.

LOBBY AREA AND CONCIERGE DESKS

- Dignified, equitable access means lobby and lift access should be through the main entrance for everyone. People with a disability should not be taken through a loading dock nor perched on an unenclosed stair climber.
- Approach to the building entrance across the parking entry/exit, will require audio and visual cues to warn of cars crossing for those who are blind or have low vision.
- The path of travel should be smooth without changes of gradient for those using wheelchairs (especially manual ones).
- As there is no 'reception' area to this building, signage for the tenancies needs to be very clear and in accessible forms.
- Specific directional signing will also be required to the 'Accessible' entrance.

- Pathways from the main entrance to the lift entrance should have sufficient space for busy traffic periods, and if there is a need to go around a corner in the approach to the lift entrances there should be a guide for better line of sight as people come around the corner.
- People will tend to cut the interior corner in both directions. AS1428.1 (6.5.1) covers 90 degree turns in corridors and specifies a 500mm corner cutaway for a 1000mm wide corridor.

LIFTS

- For commercial buildings that will not have a concierge or a security barrier, accessing lifts can be difficult without any audible cue to guide people with a visual impairment.
- Lift touchpads at the foyer level should announce the destination cars with very clear audio. The designated lift car should then open with an audible cue.
- On the way up and down the lift there should also be an audible cue of the floor number.

TOILET AMENITIES

- Accessible public toilets in Barangaroo will be in high demand and must be configured for the elderly, people who will want to take their children in there, as well as people with babies in prams who will not want to leave their children outside a standard male/female toilet.
- Ensure there is a baby change facility included in the accessible toilet.
- Wayfinding within the Barangaroo public domain should include

directional signage to the accessible toilet.

- Check the type of fittings and handles that will be installed, so they are appropriate for people with limited reach, strength and dexterity. Snib handles that secure toilet cubicle doors for example, are rarely if ever done to standard making it difficult for people with limited dexterity to use, and should be 15.2mm minimum in length, 45mm from centre of spindle.
- Auto door or sliding door is preferable for access than a manual push open door.

CONTINUOUS ACCESSIBLE PATH OF TRAVEL

- The stream of pedestrian traffic will be from Wynyard Walk, other transport hubs and the wider precinct (users of services).
- People approaching from Wynyard Walk have immediate access to ramps which lead to the retail spaces. These access paths should have TGSIs.
- The ramp gradients and landing spaces should be in accordance with AS 1428.1
- Lift access to floors is on the opposite side of the building to the ramp entrances. This is next to the car park entrance and facing onto a street. Check whether egress is safe, equitable and dignified access given that ramp entrances are directly accessible when approaching from Wynyard Walk.
- Check if grassed areas are not able to be accessed by a wheelchair user due to kerbs or garden edges?

EMERGENCY EVACUATION

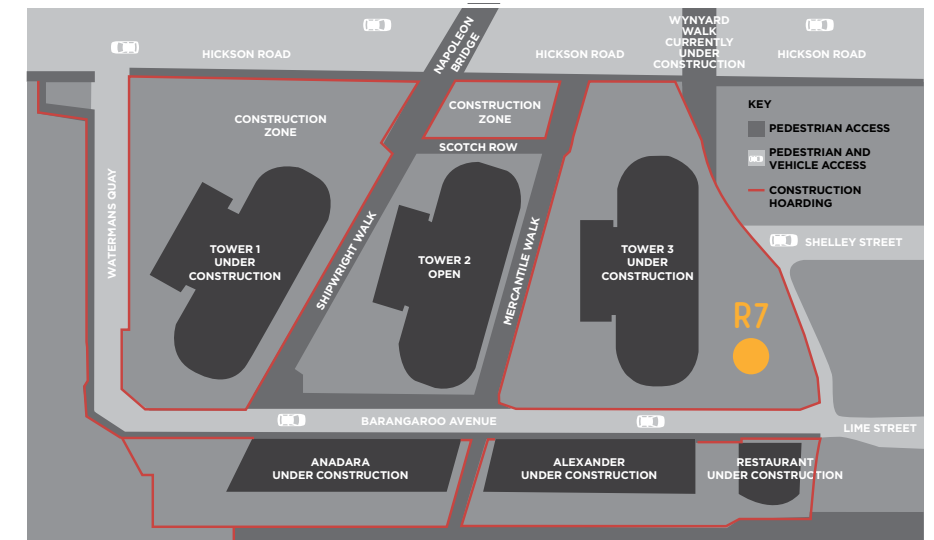
- There should be visual evacuation warnings as well as audible ones (especially in places where people who are deaf may be on their own like the toilets).

SAFE, EQUITABLE DIGNIFIED ACCESS - "RESTAURANT" AREA

- Would people in a wheelchair also have access to the rooftop view?
- Moveable seating: Give consideration to how heavy the seating is and whether the variety of seating allows for people needing arm rests and flexibility to sit and stand.
- Ensure outdoor seating has under-seat cutaways to make it easier to stand.

LIGHTING

- Consider night time wayfinding lighting for the building particularly for the visually impaired, especially given the public toilets will be there and the nature of the businesses attracting after hours customers (eg gyms etc).



5

NOTES AND REFERENCES

FOOTNOTES

1. David Cappel 2002 – David Cappel is a prominent social policy reformist and was the Commissioner for Social Inclusion in South Australia.
2. The UN Convention on the Rights of Persons with Disability defines disability in the following way: “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”.
3. World Report on Disability WHO / World Bank 2011 http://who.int/disabilities/world_report/2011/factsheet.pdf?ua=1
4. ibid
5. The social model of disability disputes that the ‘problem’ of disability lies with the individual and shifts the focus on society by locating the required interventions within the realm of social policy and institutional practice (NEDA).
6. World Report on Disability WHO / World Bank 2011 http://who.int/disabilities/world_report/2011/factsheet.pdf?ua=1
7. Sourced directly from AND and ABS 2012: Survey of Disability, Ageing and Carers <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/E82EBA276AB693E5CA257C21000E5013?opendocument>
8. Estimate from National Ethnic Disability Alliance 2011
9. www.adhc.nsw.gov.au: Living Life My Way Consultations with Aboriginal Communities Report, 2012.
10. such as respiratory disorders (eg asthma), neurological disorders (eg MS, cerebral palsy or epilepsy), musculoskeletal disorders (eg arthritis or spinal injuries, immunological disorders (eg HIV/AIDS), diabetes, kidney disease or cancer.
11. Projections for 2050 indicate that one in every four Australians will have hearing loss.
12. Intellectual disability in children is associated with the presence of intellectual and development disorders and autism spectrum disorders. In adults, it is predominantly associated with Alzheimer’s disease and Dementia. Source: Intellectual Disability, Australia 2012, Australian Bureau of Statistics
13. Mental health problems and mental illness are among the greatest causes of disability, diminished quality of life, and reduced productivity. People affected by mental health problems often have high levels of morbidity and mortality, experiencing poorer general health and higher rates of death from a range of causes, including suicide
14. Mental health problems and mental illness are among the greatest causes of disability, diminished quality of life, and reduced productivity. People affected by mental health problems often have high levels of morbidity and mortality, experiencing poorer general health and higher rates of death from a range of causes, including suicide.
15. National Disability Strategy - NSW Implementation Plan 2012–2014
16. City of Sydney – Draft Inclusion (Disability)Action Plan 2014 [http://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/78d7c7b83c57052ab4b877c5d579c142f9c1ff0f/documents/attachments/000/002/197/original/Draft_Inclusion_\(Disability\)_Action_Plan_2014-17_-_Easy_English.pdf?1392359149](http://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/78d7c7b83c57052ab4b877c5d579c142f9c1ff0f/documents/attachments/000/002/197/original/Draft_Inclusion_(Disability)_Action_Plan_2014-17_-_Easy_English.pdf?1392359149)
17. National Disability Strategy 2010-2020 Report to COAG 2012 – Summary Report - https://www.dss.gov.au/sites/default/files/documents/01_2013/nds_summary_report-41.pdf
18. <http://www.ncoa.gov.au/report/phase-one/part-b/7-2-the-national-disability-insurance-scheme.html>
19. For the NSW perspective refer to: http://www.adhc.nsw.gov.au/_data/assets/file/0009/228258/297-Disability_Action_Planning_Guidelines_web.pdf
20. Disability Planning in Local Government – Final Report – October 2013, Local Government NSW /Family and Community Services NSW http://lgnsw.org.au/files/imce-uploads/90/Final%20Report_Disability%20planning%20across%20LG%20in%20NSW_For%20distribution_date%20fix.pdf also – refer to: <http://www.lgnsw.org.au/policy/disability>
21. Source: Australian Network on Disability, ABS 2012
22. National Commission of Audit “In 2013-14, an estimated \$39.5 billion will be spent on the Age Pension, benefitting 2.4 million recipients. Expenditure on the Age Pension is currently growing at 7 per cent per year. Age Pension expenditure is expected to continue to increase largely as a result of an ageing population, increased life expectancies and benchmarking to the Male Total Average Weekly Earnings benchmark”.
23. Australian Law Reform Commission – Access All Ages—Older Workers and Commonwealth Laws (ALRC Report 120) tabled 30 May 2013 (Summary Report) – key reference made to ensuring safe workplace environments
24. Refer to: <http://www.humanrights.gov.au/our-work/disability-rights/international/disability-rights-international-convention-human-rights-and>
25. See also for example, NSW Department of Planning guidance for local councils regarding SEPP Seniors Living 2004 - Housing for Seniors or People with a Disability - http://www.planning.nsw.gov.au/settingthedirection/pdf/seniorsguide_may04.pdf
26. AND is a member-funded, not for profit organisation that works with employers to provide expert advice and progress the equitable inclusion of people with disability in all aspects of business.
27. Disability Council of NSW – Ian Scales: Consultation and People with a Disability - 1997

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- World Health Organisation Report on Disability – Fact Sheet
- http://whqlibdoc.who.int/hq/2011/WHO_NMH_VIP_11.01_eng.pdf?ua=1
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