

Design for Everyone Guide

A Guide to Sport and
Recreation Settings

August 2024

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1.



Introduction

The concept of Universal Design is to simplify life for everyone by making the built environment more usable to as many users as possible.

It is separate from accessible design as Universal Design is based on the equitable use of a facility and social inclusion and not the measurement of accessible design features and meeting minimum legislative requirements.

Applied holistically to a building without an alternative for different groups, Universal Design addresses issues of having a different approach for different users, which not only improves and simplifies the way a facility is used but also eliminates user segregation to maximise participation by users of all abilities.

1.1 Overview of Universal Design

This guide is a practical resource designed to provide both general and minimum technical information to assist:

- facility designers, planners and builders
- professionals within the building and allied industries including architects, landscape architects, civil engineers, product designers, access consultants and building certifiers
- designers and planners within local government authorities involved in building, town planning and landscaping
- Access for All Abilities and metropolitan and rural access officers
- managers, staff and committee members of existing recreation facilities which are being redeveloped
- personnel involved in maintenance
- public and private sector practitioners specialising in meeting the needs of people with a disability, older people and families.

Access to sport and recreation settings as a right for everyone is recognised principally through anti-discrimination legislation, planning ordinances, building codes and other Standards applying to the planning, design and development of facilities. These legal requirements ensure that sport and recreation facilities and settings are accessible for people with a disability.

The guide encourages stakeholders to make sport and recreation facilities and settings more accessible to everyone by using universal design and where possible adapting enhanced dimensions that go beyond the minimum Standards.

The purpose of the guide is not to provide comprehensive detailed technical information relating to every requirement under legislation and Standards, but to provide stakeholders with a practical resource and specific information to assist plan, design and develop sport and recreation facilities.

Links are provided throughout this guide to assist stakeholders gain further information if required. An accredited and qualified access consultant could also be engaged, where necessary to provide further advice.

What is Universal Design?

Universal design is the process of designing products and environments to be used by everyone, to the greatest extent possible, without the need for adaptation or specialised design. Universal design is a process, not an outcome. Universal design assists everyone, not just people with a disability.

Universal design is different to accessible design. Accessible design is usually based on minimum legislative requirements or accepted Standards that define how access should be provided to buildings, facilities and products, so they can be used by people with a disability. Often these have a tendency to lead to 'different' or 'separate' facilities, for example, a wheelchair accessible toilet or a ramp installed to the side of a stairway at an entrance to a building.

The aim of universal design is to provide one solution that can accommodate all people, including people with a disability, as well as the rest of the community; universal design incorporates the needs of older adults, children and young people, women and men and people who are left-handed or right-handed.

- [Universal Design Fact Sheet \(docx, 122.28 KB\)](#)

What are the Universal Design principles?

The Universal Design Principles were developed by the Centre for Universal Design at North Carolina State University, United States of America (USA). These principles were designed in collaboration with a consortium of universal design researchers and practitioners from across the USA.

The authors, a working group of architects, product designers, engineers and environmental design researchers, collaborated to establish the following Principles of Universal Design to guide a wide range of design disciplines. The group developed 7 principles that may be applied to evaluate existing designs, guide the design process and educate both designers and consumers about the characteristics of more usable products and environments.

Designers must also incorporate other considerations such as economic, engineering, cultural, gender and environmental concerns in their design processes.

The 7 Principles of Universal Design are detailed below. These principles offer designers guidance to better integrate features that meet the needs of as many users as possible. Note that all principles may not be relevant to all designs.

1

Equitable Use

The design is useful and marketable to people with diverse abilities. Ideally the means by which people use the setting should be the same, for example, providing one means of entry to a building that works well for everyone, not a mix of stairs and a ramp.

Guidelines

- Provide the same means of use for all users, identical whenever possible, equivalent when not.
- Avoid segregating or stigmatising any users.
- Provisions for privacy, security and safety should be equally available to all users.
- Make the design appealing to all users.

2

Flexibility in use

The design accommodates a wide range of individual preferences and abilities. The setting should allow people to use elements in more than one prescribed way, for example, providing a countertop orientation map that is viewable from either a seated or standing position.

Guidelines

- Provide choice in methods of use.
- Accommodate right or left-handed access and use.
- Facilitate the user's accuracy and precision.
- Provide adaptability to the user's pace.

3

Simple and intuitive use

The use of the design is easy to understand regardless of the user's experience, knowledge, language skills or current concentration level. The building should make it easy for everyone to understand the purpose of each element and how to use it, for example, providing a bathroom basin tap that makes the method of operation readily apparent and relatively easy to use.

Guidelines

- Eliminate unnecessary complexity.
- Be consistent with user expectations and intuition.
- Accommodate a wide range of literacy and language skills.
- Arrange information consistent with its importance.
- Provide effective prompting and feedback during and after task completion.

4

Perceptible information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities. The setting should provide all essential information in a variety of modes, for example, written, symbolic, tactile and verbal.

Guidelines

- Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information.
- Provide adequate contrast between essential information and its surroundings.
- Maximise "legibility" of essential information.
- Differentiate elements in ways that can be described (that is, make it easy to give instructions or directions).
- Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

5

Tolerance for error

The design minimises hazards and the adverse consequences of accidental or unintended actions. When potentially dangerous conditions are unavoidable, people should receive warnings as they approach the element, for example, providing proximity warnings in a variety of sensory modes near the top of stairs.

Guidelines

- Arrange elements to minimise hazards and errors, most used elements, most accessible, hazardous elements eliminated, isolated or shielded.
- Provide warnings of hazards and errors.
- Provide fail-safe features.
- Discourage unconscious action in tasks that require vigilance.

6

Low physical effort

The design can be used efficiently and comfortably and with a minimum of fatigue.

The setting should employ design features that require little or no physical force to use them, for example, replacing a traditional door knob with a lever handle that does not require the ability to grasp and turn the wrist.

Guidelines

- Allow user to maintain a neutral body position.
- Use reasonable operating forces.
- Minimise repetitive actions.
- Minimise sustained physical effort.

7

Size and space for approach and use

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture or mobility. A setting should provide an adequate amount of space that is appropriately arranged to enable everyone to use them, for example, providing knee space under a washroom lavatory* to enable use by someone in a seated position.

Guidelines

- Provide a clear line of sight to important elements for any seated or standing user.
- Make reach to all components comfortable for any seated or standing user.
- Accommodate variations in hand and grip size.
- Provide adequate space for the use of assistive devices or personal assistance.

What are the benefits of Universal Design?

Universal design benefits all people. If buildings and products are designed with consideration of the needs of as many users as possible, there will be a greatly reduced requirement for modification and the additional expense related to this, as individual needs change.

In addition, the ability of more people to participate in sport and recreation is greatly enhanced when the Principles of Universal Design are incorporated into buildings, facilities and products.

In Australia, the benefits of universal design are becoming more widely understood and recognised. The Australian Commonwealth Government has acknowledged the Principles of Universal Design in its National Disability Strategy 2010-2020. In addition, the National Rental Affordability Scheme assesses affordable housing initiatives against a number of universal design criteria for funding eligibility.

The voluntary Livable Housing Design Guidelines, developed by the National Dialogue on Universal Housing Design also recognises the benefits of universal design principles in the development of housing for everyone.

Sport and Recreation Victoria supports and encourages use of the Principles of Universal Design in the planning, design, development and upgrade of all sporting and recreation facilities.

For further information in relation to universal design go to:

- [Global Universal Design Commission](#) - USA
- [Center for Universal Design](#) (North Carolina State University, USA)
- [Center of Inclusive Design and Environmental Access](#) (University of Buffalo, USA):
- [Livable Housing Design Guidelines](#) - Australian Government Department of Families, Housing Community Services, and Indigenous Affairs
- [National Disability Strategy 2010- 2020](#) – an initiative of the Council of Australian Governments.

2.



Planning for Universal Design and equitable access

Planning for equitable access is based on the concept and principles of universal design. In a practical sense in relation to sport and recreation facilities, this means that planning should be undertaken to ensure that the design of the facility supports and enables use by everyone. This includes children and older adults, people of different sizes and abilities, people with and without access challenges, people who are left-handed or right-handed and people using a range of mobility aids.

Fundamental to effective planning are notions central to universal design of equitable and dignified access, for example, if people using mobility aids, such as prams or wheelchairs, can only enter a building through a rear entry and must move through a working kitchen to reach the customer service area because there are steps at the principal pedestrian entry with no level entry or ramp access, then equitable, dignified access has not been provided.

A key aim of equitable access and design in sporting and recreation facilities is that everybody is afforded the same opportunities to participate in all aspects of the facilities, programs and services and has access to products in an equitable, dignified manner. This includes people who are active sporting participants, administrators, spectators, visitors and others who may be using the facility for any reason, at any time.

2.1 Key elements of sport and recreation facilities

Equitable access to all key elements of sport and recreation facilities must be considered to ensure everyone can participate. In general, these elements include:

- amenities, for example, toilets, showers and change rooms
- buildings
- communications systems
- entrances and exits
- installations, for example, drinking fountains, seating and litter bins
- lighting
- pedestrian pathways systems
- playspaces
- spectator areas.

2.2 Key functional abilities and supports

In order for planning to occur in the design and development of these key elements to support equitable access, consideration must be given to a wide range of issues that impact on the ability of people to effectively use sport and recreation facilities.

These issues relate to a person's functional abilities and incorporate the general functional needs of all people, as well as functional needs that may be specific to individuals. These include:

- balance
- bending and kneeling
- coordination
- extremes of size and weight
- hearing
- height
- interpreting information
- left or right-hand preference
- mobility
- moving limbs or head
- reach and leaning
- stamina
- strength
- using hands and fingers
- vision.

In addition, a range of functional supports used by many people must also be considered when designing for equitable access. In sporting and recreation facilities these functional supports could include:

- assistance animals
- communication devices, for example, boards or mobile telephones
- crutches
- electric scooters
- flotation and swimming supports
- hearing aids and assistive listening devices
- mobile hoists
- portable seating
- prams / strollers
- reading and distance glasses
- trolleys to carry equipment
- umbrellas and shade structures
- walkers
- walking canes
- wheelchairs – dry and aquatic, large and small, manual and electric
- white canes.

These functional supports could also include fixed installations such as:

- adequate lighting
- audible and visible emergency alarms in buildings
- baby and adult change tables
- battery recharge points for scooters or electric wheelchairs
- Braille and tactile signage
- colour contrasts to designate spaces, for example, male toilets, female toilets
- contrasting strips across glass doors and walls
- controls and light switches that are easy to reach by children and adults who are standing or seated
- D or D type lever door handles
- grab rails for both left and right handed users
- handrails at heights for both adults and children
- hazard tactile ground surface indicators prior to stairs and ramps and other hazards
- large, rocker type light switches, large, proud, push buttons on controls in contrast to background surfaces
- level, slip resistant floor and ground surfaces (in wet and dry conditions)
- nosings on step treads
- ramps with gentle gradients
- seats in showers
- seats with backs and armrests at a variety of heights and locations
- soft fall surfaces under play equipment that can be easily traversed by a person using a mobility aid
- shade and shelter
- visible and audible alerts at water sequencing changes in swimming pools, for example, wave pools
- wide entry and exit points
- wide pathways and corridors with contrast edges.
- amenities, for example, toilets, showers and change rooms
- buildings
- communications systems
- entrances and exits
- installations, for example, drinking fountains, seating and litter bins
- lighting
- pedestrian pathways systems
- playspaces
- spectator areas.

2.3 Case studies

Toilets

The following case study of a toilet is provided to highlight how the range of key functional abilities of a person needs to be considered in design by identifying how these can impact on a person using the toilet. Note, this is an example only.

Table 1: Design of a toilet addressing functional ability of a person

Functional ability	Example of impact on use of a toilet
Balance	Sitting on the toilet seat
Bending and kneeling	Opening the toilet seat lid
Coordination	Using the toilet paper holder / hand dryer
Extremes of size and weight	Moving easily within the allocated space
Hearing	Hearing an emergency alarm in the building
Height	Using the mirror
Interpreting information	Identifying the correct facility, for example, male, female or unisex
Left or right-hand preference	Accessing the grab rails next to the toilet pan
Mobility	Moving a mobility aid within the space
Moving limbs or head	Transferring on to the toilet
Reach and leaning	Reaching the flushing control, grabrails and other fittings
Stamina	Location and distance to travel to toilet
Strength	Opening the door
Using hands and fingers	Operating the door handle, occupied indicator, taps or other controls
Vision	Locating the seat and flushing control, using signage

Portable Ramp

The following case study of a portable ramp is provided to highlight how the range of key functional abilities of a person needs to be considered in design by identifying how these can impact on a person using a ramp. Note, this is an example only.

Table 2: Design of a portable ramp addressing functional ability of a person.

Functional ability	Example of impact on use of a ramp
Balance	Moving along a sloped surface
Coordination	Moving along the ramp within the defined kerbs and handrails particularly at any curve in the ramp
Extremes of size and weight	Moving easily within the allocated ramp width and overhead clearance
Hearing	Hearing an emergency alarm in the building
Height	Avoiding any overhead obstructions
Interpreting information	Identifying the entry to the ramp
Left or right-hand preference	Accessing the handrails on either side of the ramp
Mobility	Moving a mobility aid within the space
Moving limbs or head	Ensuring side clearance to allow use of the handrails without contact with any adjoining walls
Reach and leaning	Reaching the handrails
Stamina	Landings at appropriate locations along the ramp for resting Appropriate gradient of the ramp
Strength	Moving a mobility aid along the ramp
Using hands and fingers	Using the handrails
Vision	Locating the ramp edges/kerbs and signage

2.4 Dimensions

Buildings, facilities and installations

The Australian Disability (Access to Premises – Buildings) Standards 2010 provide minimum requirements for access to new and upgraded buildings for people with disabilities. While designing facilities to meet the needs of people with disabilities usually results in improved access for everyone, it does not incorporate all of the elements of effective equitable access.

It is, however, widely accepted that these are the minimum starting points that should be used when determining the basic requirements for equitable access to buildings. These Standards are limited and do not address a range of important dimensional considerations for building elements, including general signage and wayfinding, emergency exits, communication, information or fixtures, fittings or installations.

In order to gain further information regarding dimensions and a guide to design for improved access, the Australian Standards for Access and Mobility must also be used, particularly AS1428 parts 1 – 5 and other related Standards, including car parking and lifts.

A summary of key access dimensions is provided in this guide (Summary of key access dimensions) and links are provided throughout this guide that are related to specific building and installation elements to assist with equitable access and design. A full list of all these links is also provided in this guide.

Functional supports

The range of functional supports used by many people is wide and varied in its dimensions and therefore poses some challenges in designing for equitable access.

Similar to buildings, the suite of Australian Standards for Access and Mobility 1428 parts 1 – 5, as well as the Australian Standards for Car Parking and Lifts are used as an indication of the requirements for some of these functional supports. As identified for buildings, facilities and installations, these Standards relate primarily to the needs of people with disabilities and do not incorporate all of the elements of effective equitable access.

However, in order to gain further information regarding minimum dimensions for functional supports and a guide to design for equitable access, the below links are provided for further reference.

Table 3: Useful links for functional supports

Functional supports	Links
Assistance animals	Assistance Dogs Australia Guide Dogs Lions Hearing Dogs Australian Support Dogs
Australian Standards	Australian Standards
Communication devices and white canes	Vision Australia
Compliance guidelines for websites	World Wide Web
Crutches and electric scooters	Independent Living Centre
Eye glasses	Optometrists Association of Australia
Equipment trolleys	Australian Standards
Flotation and swimming	Royal Life Saving Society
Hearing aids and assistive listening devices	Australian Hearing VicDeaf Australian Standards
Mobile hoists	Independent Living Centre
Seating, prams and strollers	Australian Standards
Shade structures	Lightweight Structures Association of Australasia
Walkers, walking canes and wheelchairs	Independent Living Centre
Wayfinding design guidelines and wayfinding system audit	Construction innovation

2.5 General planning considerations

In addition to planning a recreation or sporting facility for equitable access (being mindful of the principles of universal design), there are a number of other general planning considerations that must be addressed.

These include:

- undertaking a feasibility study
- engaging the community in consultation
- identifying initial funding
- determining a suitable location
- estimating and addressing environmental impact issues
- developing appropriate energy efficiency strategies
- determining ongoing sustainability
- developing a facility management plan
- identifying and planning long term maintenance
- addressing issues of cultural and gender appropriateness
- determining and planning ongoing cost issues
- designing for specific sports or recreation activities.

2.6 Websites and resources

Accessible websites containing information about buildings, facilities and services related to sport and leisure facilities are essential to make use easy for everyone. Access to up-to-date information is important as well as the key accessible features of the facility, the availability of accessible parking, toilets and change facilities and other key elements that impact on the usability of the location.

Key requirements

The range of functional supports used by many people is wide and varied in its dimensions and therefore poses:

- Clear concise information presented in appropriate fonts, typeface, colour and contrast and is consistent in its graphic style and text use. Appropriate use of international symbols of access or deafness which clearly designate elements, sites and services where services are available, staff information booth and accessible toilets.
- Visitor's Guide (where applicable) for download.
- Management procedures established to ensure any information on a website is updated and correct on a regular basis.
- Links to other appropriate websites and information points.
- Avoidance of colours within the range of a 'ripening of a tomato', green, yellow, orange, red on website.

A website that is designed to meet the W3C World Wide Web Accessibility Guidelines and includes the following minimum key elements:

- appropriate font type, style and size
- dark text on light background in preference to light on dark
- highest possible colour contrast
- no patterned or screened background
- use of upper and lower case (not capitals only)
- wide spacing between letters
- wide margins on pages
- bold and larger print for headings
- use of characters such as brackets, slashes, colons, semi-colons and hyphens sparingly
- left aligned text with ragged right side
- text description to explain tables, graphs and photographs
- symbols and / or illustrations
- text without underlines or italics
- alternatives to PDF documents, Word, RTF
- options to change text size
- audio options for listening.

Key access dimensions

- Minimum 12 pt
- Minimum 18 pt for publications that target older adults or people with vision impairment.
- Sans serif type font, Arial or Helvetica.
- Minimum 16 point leading (line spacing).

Links to other relevant information

- [Access awareness handbooks](#)
- [Vision Australia](#)
- [World Wide Web Compliance Guidelines](#)

3.



Facility Elements

3.1 Kitchens

The following key requirements and access dimensions for kitchens must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

Key requirements

The range of functional supports used by many people is wide and varied in its dimensions and therefore poses:

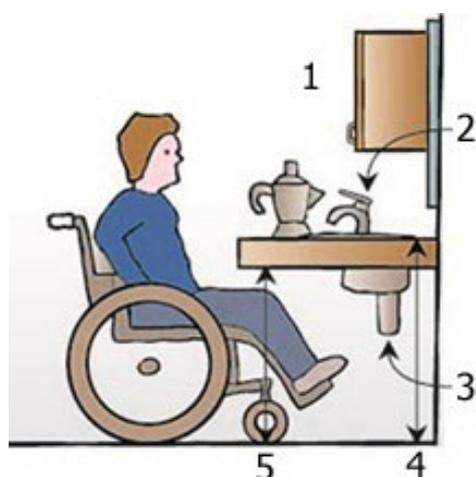
- A continuous accessible path of travel from the site entry to and through any kitchen.
- Clear, easy to read signage at the entry to the kitchen incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Clear maneuvering spaces between sink, benches and tables.
- Appliances, stoves, cook tops, hot and cold water dispenser units that have easy to see and use controls at the front or side and can be accessed from a standing or seated position.
- Remote controls to operate all equipment and appliances that may be difficult to reach.
- Appliances with large print instructions.
- Automated, cordless appliances, for example, kettle.
- Large, easy grip utensils.
- Auto ignition burners on stoves that align with adjoining benches.
- Drawers or open fronted storage space and shallow shelves with appropriate clearance within and under any pantry or food storage cupboard.
- Low height/adjustable kitchen sink and benches with appropriate clearance around and underneath.
- Lever or sensor controls on taps.
- Tea and coffee making facilities that can be accessed from a standing or seated position.

- Clearly marked hot and cold water dispenser units in sinks (mixers preferred) and boiling or chilled water units (if installed) that have easy to see and use controls at the front or side and can be used by a person when standing or seated.
- Movable furniture, including chairs with backs and armrests.
- Access to appropriate toilets for all users including people with mobility challenges, for example, ambulant and unisex accessible toilets.

It is important for all stakeholders and project partners to understand and acknowledge the full process involved in community sport and active recreation facility planning and design.

Key access dimensions

Figure 1: Side view of a kitchen area



1. Shelving cupboards in reach for a person sitting.
2. Easy to reach and use, lever or sensor controls on taps.
3. Exposed down pipes located out of way or insulated where hot water in use.
4. Kitchen sink 770 to 800 mm high.
5. 640 to 650 mm leg clearance underneath sink.

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach.
- Kitchen bench and counter 830 to 870 mm high with a leg clearance underneath of 800 to 840 mm for a minimum of 900 mm.
- Kitchen sink 770 to 800 mm high with 640 to 650 mm leg clearance underneath
- Appliance cords 1100 mm minimum length.
- Tea and coffee facilities with highest operable components at 900 to 1100 mm high.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for kitchens

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- AS 4299 - 1995 Adaptable Housing
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [All buildings](#)
- [All installations](#)
- [Access awareness handbooks](#)
- [Australian Standards](#)
- [Emergency Egress Procedures](#)
- [Livable Housing Australia](#)
- [The Good The Bad and The Ugly](#) (note that changes due to the introduction of the Disability (Access to Premises - Buildings) Standards 2010 will not be reflected in this resource).

Fire extinguishers and alarms

The following key requirements and key access dimensions for fire extinguishers and alarms must be considered in addition to those for all installations.

Key requirements

- Emergency management plan installed at a height that can be read by a person when standing or seated, and incorporates information, (including international symbols of access or deafness where relevant), regarding continuous accessible paths of travel to nominated emergency assembly areas for all people.
- Visible and audible emergency alarms.
- Variety of fire extinguishers for range of emergency situations.
- Various size fire extinguishers for ease of use by all people.
- Emergency alarms that can be activated without the need for excessive force.
- Personal emergency alarms for any staff working in a building who may not be able to easily operate fire extinguishers or fixed alarms.

Key access dimensions

- Appropriate reach ranges and controls in accordance with Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials.

Links to other relevant information

- [All installations](#)
- [Emergency exit](#)
- [Australian Standards](#)
- [Emergency Egress Procedures](#)
- Wayfinding Design Guidelines and Wayfinding System Audit
- [Australian Hearing.](#)

3.2 All Buildings

There are a number of general key requirements and key access dimensions to consider for all buildings in order to maximise building use for everyone.

General key requirements

A continuous accessible path of travel must be provided from any car park, public transport and taxi set down area and property boundary to and through all buildings, facilities, installations and key elements within a site to support access and use by everyone. This route can consist of pathways, roadways, pedestrian crossings and ramps. It cannot incorporate any step, stairway, turnstile, revolving door, escalator, moving walk or other impediment. Key requirements to consider in all buildings include:

- if onsite parking is provided, an adequate number of a range of parking bays suitable for vehicles of various sizes, uses and using various loading systems, that is, side, rear, roof mounted storage
- clear markings on parking bays indicating specific use, for example, accessible bays, parents with prams and seniors
- clear, easy to read signage at the entry to, and within any building incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated, and incorporating raised tactile and Braille elements
- an adequate number of accessible pedestrian entrances

- signage at any non-accessible entrances indicating closest accessible entrances
- wide, level transition or an appropriate threshold or step ramp at entrances as well as at all doors, doorways and exit points of the building
- wide doorways (automatic self - opening doors and sliding doors where possible) that are not heavy or hard to open and incorporate appropriate circulation space
- level, slip resistant floor surfaces in wet and dry conditions, incorporating low pile carpet (in any areas where carpet is installed)
- clearly marked contrasting safety strips across the full width of any fully glazed doors or walls
- vision panels in doors that allow viewing from either side of the door by a person when standing or seated
- controls on doors, appliances, equipment, fire alarms and extinguishers, lighting, power outlets and other installations that can be reached by a person when standing or seated and used with a closed fist or open palm, and incorporating raised tactile and Braille elements
- wide corridors free from any side or overhead obstructions
- remote controls to operate any equipment and appliances that may be difficult to reach
- customer service counters, benches, sinks and other installations that incorporate appropriate low heights and leg clearance underneath
- effective acoustic environment at any staff interaction areas
- information stands and notice boards in locations that do not limit pedestrian movement and that can be reached by a person when standing or seated
- hearing augmentation where inbuilt amplification is installed in any auditorium, hall, meeting or conference room, where a public address system is installed, or at any ticket office, enquiry, cashier or reception area where the public is screened from the service provider
- effective contrasts between vertical and horizontal surfaces around doors, door frames, equipment, benches, counters or other installations
- movable, firm furniture, including chairs and seating with backs and armrests
- lifts or ramps as an alternative to stairs
- lifts with wide door openings, adequate circulation space, audio announcements and controls incorporating raised tactile and Braille elements
- ramps that incorporate appropriate gradients and surfaces as well as handrails and kerbs on both sides
- steps and stairs that incorporate firm, level slip resistant surfaces, edge nosings, opaque risers and handrails on both sides
- hazard tactile ground surface indicators prior to kerb ramps (where required), steps, ramps, moving walks, escalators, lifts or as a warning of any overhead hazard
- an adequate number of appropriate toilets for all building users including people with mobility challenges, for example, ambulant and unisex accessible toilets

- if provided in any building, showers that include a unisex accessible facility
- emergency exits (in addition to principal pedestrian entry points) that are wide, level, well signed and provide a continuous accessible path of travel from the building to any nominated emergency assembly areas
- audible and visible emergency alarms
- emergency Evacuation Plans displayed so that they can be read by a person when standing or seated, identifying the location of accessible paths of travel to nominated assembly areas for both ambulant and non-ambulant building users
- consistent and even lighting (reflected downward - without pooling or providing glare) throughout the building, including at entry and exit points, customer service areas, toilet facilities, ramps, steps or stairs and over other installations.

Relevant Australian Standards for all buildings

- AS/NZS 2890.6 - 2009 Parking facilities - Off-street Parking for People with Disabilities
- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 1428.3 – 1992 Obsolescent June 2012 Design for access and mobility - Requirements for Children and Adolescents with Physical Disabilities
- AS/NZS 1428.4.1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 1428.5 Design for access and mobility - Communication for People who are Deaf or Hearing Impaired
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- AS 1735 Lifts, Escalators and Moving Walks
- AS 1670.4 - 2004 Fire detection system design, installation and commissioning - Sound Systems and Intercom Systems for Emergency Purposes
- AS 2293.1 - 2005 Emergency escape lighting and exit signs for buildings - System Design, Installation and Operation
- AS 4428.4 -2004 Fire detection, warning, control and intercom systems - Control and Indicating Equipment - Intercommunication Systems for Emergency Purposes
- AS 3745 - 2010 Planning for emergencies in facilities
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Access awareness handbooks](#)
- [Building Sight](#)
- Centre for Accessible Environments UK
- [Centre for Universal Design USA](#)
- [Emergency Egress Procedures](#)
- [Australian Hearing](#)
- [Livable Housing Australia](#)
- [The Good The Bad and The Ugly](#) (note that changes due to the introduction of the Disability (Access to Premises - Buildings) Standards 2010 will not be reflected in this resource).
- [VicDeaf](#)
- [Vision Australia](#)
- Wayfinding Design Guidelines and Wayfinding System Audit
- [Human Rights and Equal Opportunity Commission](#)

Entrances and doorways

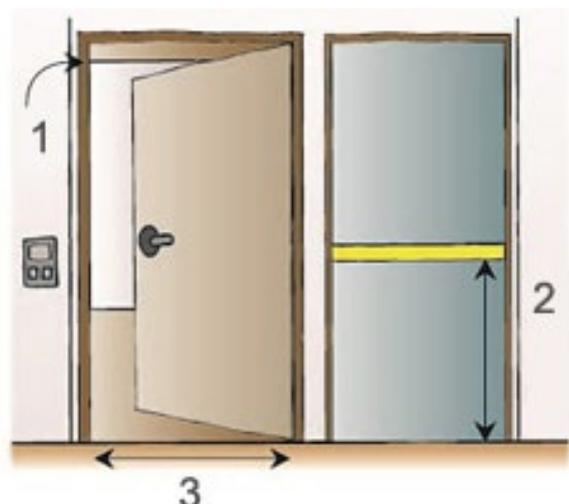
Key requirements

- A continuous accessible path of travel from the property entrance and any onsite car park to principal entrances.
- A range of accessible entrance points in larger buildings.
- Clear, easy to read signage at entrances, incorporating relevant international symbols of access or deafness that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Entrances that are visible from any vehicle access routes, set down areas and car parks with appropriate signage that directs users to their desired destination.
- Path surfaces at entrances with a contrast colour, texture or material to assist with identification of the entrance.
- Level transition or an appropriate threshold or step ramp at entrances.
- Wide doorways (self-opening preferred), that are not heavy or hard to open and provide appropriate circulation space at entrances.
- Effective motion and presence sensors at any automatic opening doors.
- D or D lever style door handles in contrast to background and adjacent surfaces on all entrance doors where handles are required.
- Easy to adjust door closers.
- Door controls that can be reached by a person when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements, for example, entry buzzer and afterhours access.

- Door controls that are located on the path of travel to the door, to allow adequate time when in operation for a person to move fully through the door prior to the door closing.
- Airlocks at any entrances that allow ease of movement, particularly for people using mobility aids or assistance animals.
- Alternatives to swing doors where circulation space may be limited, for example, sliding doors.
- Glazing panels in entrance doors to assist users to view pedestrian traffic from either side.
- Appropriate safety strip on any fully glazed entrance doors or adjacent fully glazed wall capable of being mistaken as an entrance.
- Metal kick plate at the bottom of doors to protect against damage by prams, strollers and wheelchairs.
- Entrance doors that can be opened from the outside of a room in an emergency.
- Use of screens or baffles at entrances (where appropriate, for example, toilets) that eliminates the need for doors.
- Effective contrasts between doorways, controls, walls, leading edge of doors and adjacent and background surfaces.
- Clear, accessible space inside entrances of a building that allows users to adjust to changed lighting conditions within the building interior.
- Glare free floor surfaces inside any building entrance that may be perceived as being slippery.
- Seating with backs and armrests that is located near the entrance to a building and gives clear lines of sight to any taxi zone, set down or waiting area.
- Shade and shelter at building entrance doors, to allow people to wait out of inclement weather if doors are not open.
- Shade and shelter at entrances in contrast to background and surrounding surfaces to assist with identification of the entrance.
- Alternatives to queuing areas at entrances that require people to stand for long periods.
- Adequate circulation space through queuing areas at entrances for people with mobility aids, for example, prams, wheelchairs.
- Lighting at entrances that has a higher lux level than the surrounding lighting to assist with identification and safety.

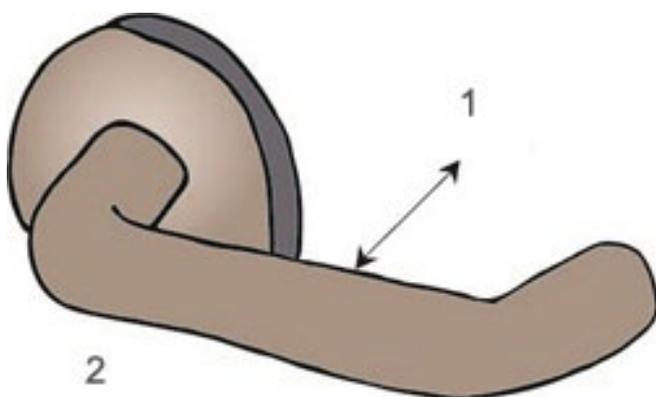
Key access dimensions

Figure 2: Door entrance



1. Minimum 50 mm luminance contrast at entrance
2. Solid contrast strip on fully glazed doorway/sidelight (window). Height of strip bottom edge 900 to 1000 mm above floor level
3. Minimum clear door opening width 850 mm

Figure 3: D lever style door handle



1. Doorhandles with 35 mm and not more than 45 mm clearance between the handle (in the centre) and the back plate or door face
2. D or D lever style handle with return, installed at a height of 900 to 1100 mm above floor level

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide to entrances.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Any non-accessible building entrance to be located not more than 50 m away from an accessible entrance.
- If a pedestrian entrance consists of not more than 3 doorways - not less than one of those doorways must be accessible.
- If the pedestrian entrance consists of more than 3 doorways - not less than 50% of those doorways must be accessible.
- A minimum 850 mm clear opening width at entrances with circulation space on both sides that considers angles of approach and incorporates level landings (including the operative leaf of a multiple leaf door).
- Maximum rise of 35 mm, 280 mm length and gradient of 1:8 at any threshold ramps.

- Step ramps to meet circulation spaces and angles of approach at doorways in accordance with the range in Australian Standards.
- Solid strip a minimum of 75 mm wide installed with the lower edge at a height of 900 to 1000 mm above floor level across the width of any fully glazed door or glass wall that could be mistaken for an entrance. A minimum 30% luminance contrast to the background is also required.
- A maximum force of 20N at the entrance door handle to open doors, and door closers that are adjustable.
- Any entrance buzzer or intercom 900 to 1200 mm high.
- D type or D type lever style door handles on any doors requiring handles at 900 to 1100 mm high.
- Push button controls that are a minimum of 25 mm diameter and sit proud of the wall surface.
- Door controls and switches that need to be grasped or turned at 900 to 1100 mm high.
- Door controls that only need to be touched at a height of 900 to 1250 mm and not less than 500 mm from an internal corner.
- Door controls that only need to be pushed, for example, panic bars on egress routes, at a height of 900 to 1200 mm.
- Door controls that are manually operated for power operated entrance doors, at a height of 900 to 1100 mm, no closer than 500 mm from an internal corner.
- Door handles with 35 mm and not more than 45 mm clearance between the handle (in the centre) and the back plate or door face.
- A pull bar or handrail at a height of between 900 to 1100 mm on any outward opening door that is not self-closing.
- Sliding entrance door handles a minimum of 60 mm from the door jamb or door stop when closed / open.
- Snibs with a lever handle a minimum of 45 mm from the centre of the spindle.
- Minimum 30 mm x 30 mm buttons or switches for entrance controls, proud of surrounding surfaces.
- A minimum distance of 1450 mm between entrance doorways within an airlock or vestibule, plus the door leaf width if the door opens into the space.
- Minimum 30% luminance contrast between doors, doorway, controls and background and adjacent surfaces.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with Australian Standards.
- Appropriate reach ranges and controls in accordance with Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Buildings
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises Buildings) Standards 2010.

Links to other relevant information

- [Floor and ground surfaces](#)
- [Fences, gates and bollards](#)
- [Keys, keypads and padlocks](#)
- [Lighting and contrasts](#)
- [Baffles and screens](#)
- [Shade and shelter](#)
- [Signage and wayfinding](#)
- [Australian Standards](#)
- [Access awareness handbooks](#)
- [The Good The Bad and The Ugly](#)

Key requirements

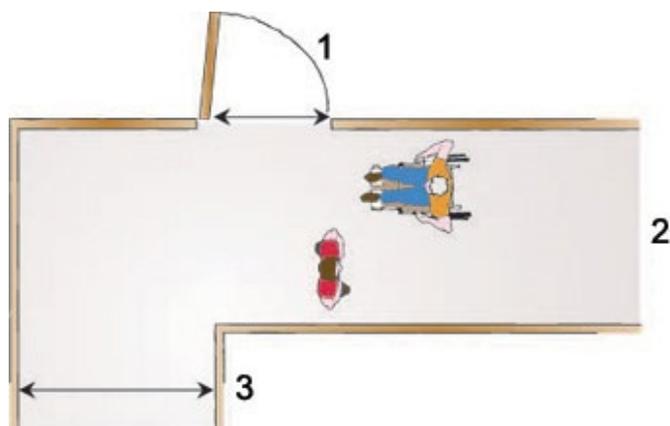
A continuous accessible path of travel must be provided from the building entry to and through the facility providing access to all facilities including customer service areas, multipurpose rooms, toilets, activity spaces and installations. This route cannot incorporate any step, stairway, turnstile, revolving door, escalator, moving walk or other impediment. The key requirements of accessible internal corridors include:

- wide corridors with firm, level, stable, slip resistant floor surfaces in both wet and dry conditions
- a level transition or an appropriate threshold or step ramp at corridor entrances
- low pile carpet (where carpet is installed)
- appropriate safety strip on any fully glazed door or wall in a corridor capable of being mistaken as an entrance
- switches and power outlets on walls that horizontally align with door handles and other controls on walls
- turning spaces where it is not possible to continue to the end of a walkway or corridor

- passing spaces where a direct line of sight is not available to the end of the walkway or corridor
- effective contrasts between doorways, walls and adjacent and background surfaces
- any stairs or ramps, including handrails, set back so they do not encroach into the corridor.

Key access dimensions

Figure 4: Accessible internal corridor



1. A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach
2. Passing spaces provides at a maximum of 20 m intervals (refer to Australian Standards)
3. A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach.
- Fixed carpet (where carpet provided) with a pile height or pile thickness not exceeding 11 mm and carpet backing thickness not exceeding 4 mm.
- A maximum interval of 20 m at any passing space. Size of passing spaces is dependent on angle of walkways or corridors.
- Turning spaces within 2 m of the end of a walkway or corridor where it is not possible to continue.
- Maximum rise of 35 mm, 280 mm length and gradient of 1:8 at any threshold ramp at a doorway.
- Step ramps to meet circulation spaces and angles of approach at doorways.
- Solid strip a minimum of 75 mm wide installed with the lower edge at a height of 900 to 1000 mm above floor level across the full width of any fully glazed door or wall that could be mistaken for an entrance.
- A ramp or stair setback a minimum of 400 mm at any internal corridor.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Buildings
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Lighting and contrasts](#)
- [Ramps](#)
- [Signage and wayfinding](#)
- [Stairs](#)
- [Australian Standards](#)
- [Emergency Egress Procedures](#)
- [Access awareness handbooks](#)
- [Livable Housing Australia](#)
- [The Good The Bad and The Ugly](#) (note that changes due to the introduction of the Disability (Access to Premises - Buildings) Standards 2010 will not be reflected in this resource).

Multipurpose rooms

The following key requirements and access dimensions for multipurpose rooms must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

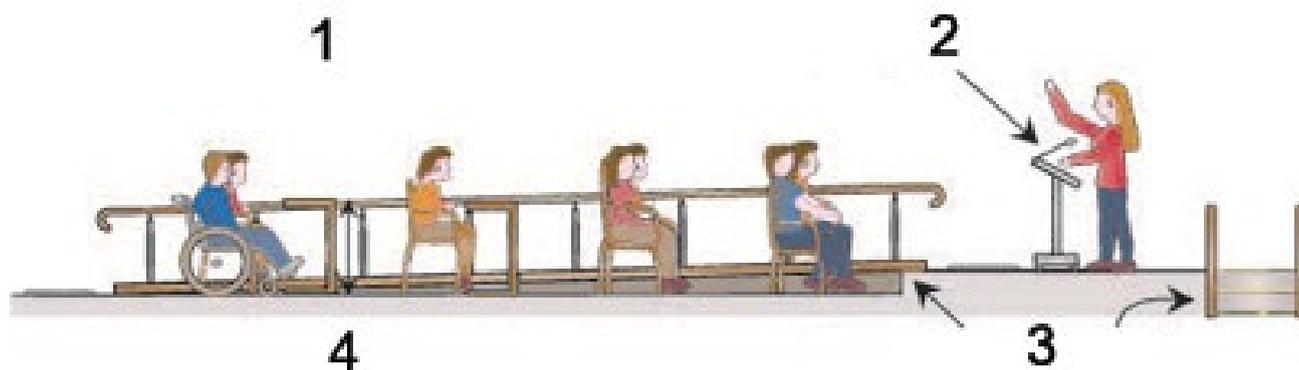
Key requirements

- A continuous accessible path of travel from the site entry to and through any multipurpose room.
- Clear, easy to read signage at the entry to the multipurpose room incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Clear, concise signage with a large size number or name at the entrance to the multipurpose room.
- Wide waiting areas outside the multipurpose room to enable people to wait outside without interrupting the flow of pedestrian traffic through the rest of the building.

- A low height bench and sink (if installed in the multipurpose room) that incorporates appropriate leg clearance underneath.
- A hearing augmentation system where an inbuilt amplification system is installed.
- Lever or sensor operated taps in any wet areas.
- Hot water, tea, coffee making facilities that can be used by a person when standing or seated.
- Podium or stage with appropriate level or ramp access, that is large enough for people using a mobility aid or assistance animal to undertake a presentation effectively.
- Adjustable height microphone and lectern with easy-to-use controls.
- Long connection leads for lap top computer and data projector to ensure laptop can be seen and used from the presenter's table.
- Televisions that incorporate closed captioning functions.
- Controls on appliances, equipment, lighting and power outlets that can be reached by a person when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements.
- Remote controls to operate any equipment and appliances, including presentation devices that may be difficult to reach.
- Accessible storage area for mobility aids and recreational equipment.
- A range of appropriate recreation equipment that considers the needs of all potential users.
- Movable, firm furniture, including chairs with backs and armrests.
- Access to 'break out' rooms associated with any multipurpose room.
- Access to outdoor spaces and rooms associated with any multipurpose room.
- Shade and shelter over any outdoor spaces associated with multipurpose rooms.
- Access to appropriate toilets for all users including people with mobility challenges, for example, ambulant and unisex accessible toilets.

Key access dimensions

Figure 5: Room set up with a stage/podium and seating



- | | |
|---|---|
| 1. Lighting installed to required lux levels in accordance with the range in Australian Standards | 3. Ramp / stair access to stage / podium |
| 2. Height adjustable lectern | 4. Tables that are of varying heights 730 to 870 mm above floor level with appropriate leg clearance underneath |

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach.
- Hearing augmentation that covers 80% of the floor area served by inbuilt amplification or 95% of the space if a system using receivers or the like is in use.
- Tables that are of varying heights 730 to 870 mm above floor level with appropriate leg clearance underneath.
- Kitchen sink 770 to 800 mm high with 640 to 650 mm leg clearance underneath
- Tea and Coffee facilities with highest operable components at 900 to 1100 mm.
- Maximum 1:14 (1:20 preferred) ramp or 1:10 step ramp to any stage and podium.
- Seating with backs and armrests (220 to 300 mm above the seat) at a height of 350 mm - suitable for children, 450 mm - general public use, 520 mm - for older adults).
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities

- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010
- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work.

Links to other relevant information

- [All buildings](#)
- [All installations](#)
- [Australian Standards](#)
- [Emergency Egress Procedures](#)
- [Access awareness handbooks](#)
- [Livable Housing Australia](#)
- [The Good The Bad and The Ugly](#) (note that changes due to the introduction of the Disability (Access to Premises - Buildings) Standards 2010 will not be reflected in this resource).

Playspaces

The following key requirements and access dimensions for playspaces must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

Key access requirements

- A continuous accessible path of travel from the site entry to and through any playspace.
- Clear, easy to read signage at the entry to the playspace incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Alternatives to locks on child proof gates on accessible paths of travel to the entry, for example, buzzer or swipe card.
- Controls on equipment that can be reached by a person when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements.
- Play components that cater for the expected age of users and their developmental needs, for example, physical or active play, cognitive play, social play.
- Soft fall surface materials that can be accessed by all users, for example, adult, child or person using a wheelchair around play components.
- Minimum of one of each play component type which is accessible, for example, swing, slide and sand pit.

- Seating with backs and armrests provided in a variety of configurations and heights that are accessible to adults and children and are located within viewing range of the play components.
- Drinking fountains that are accessible from a standing or seated position.
- Shade and shelter over some seating and play components.

A range of play elements and components suitable for people of all ages including:

- multipurpose play activities such as sand diggers, climbing equipment, ball courts, cubbies or swings
- interesting places or surfaces that suggest particular games or encourage activities such as rolling, hiding or running
- vegetation, sand or loose materials that invite building, collecting or creative imaginative play
- elements that provide acceptable risk, changes in surfaces and sensory elements that include tactile, audible and olfactory components.
- Access to appropriate toilets for all users including people with mobility challenges, for example, ambulant and unisex accessible toilets.

Key access dimensions

- A continuous accessible path of travel that is a minimum of 2000 mm high and 1000 mm wide for an ambulant person, 1200 mm wide for a person using a wheelchair, 1500 mm wide for 2 people to pass each other easily and 1800 mm wide for a person using a wheelchair to turn 180 degrees to and through the area connecting all facilities.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Any entrance buzzer or intercom on a childproof gate 900 to 1200 mm high.
- Minimum 850 mm clear opening width at doors / gates and circulation space on both sides of doors that considers angles of approach and incorporates level landings
- Level circulation space around all installations.
- Seating with backs and armrests (220 to 300 mm above the seat) at a height of 350 mm - suitable for children, 450 mm - general public use, 520 mm - for older adults).
- 1900 mm x 2300 mm to a height of 2000 mm minimum pan circulation space incorporating appropriate fixtures and fitting installation in any accessible toilet.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 1428.3 – 1992 Obsolescent June 2012 Design for access and mobility - Requirements for Children and Adolescents with Physical Disabilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- AS 4685 - 2004 Playground equipment safety set.

Links to other relevant information

- [All buildings](#)
- [All installations](#)
- [Access awareness handbooks](#)
- [Australian Standards](#)
- [Good Playspace Guide: "I can play too" \(pdf, 1.42 MB\)](#)
- Victorian Legislation and Parliamentary documents
- Australian Children's Education and Care Quality Authority.

Retail areas

The following key requirements and access dimensions for retail areas must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

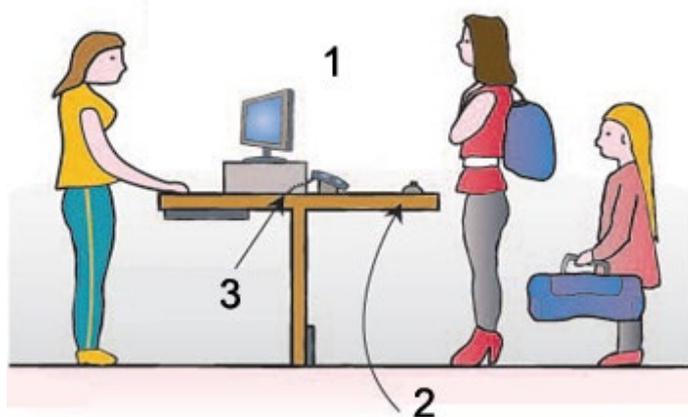
Key requirements

- A continuous accessible path of travel from the site entry to and through any retail area.
- Clear, easy to read signage at the entry to the retail area incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Assistance Animals Welcome sticker at entry.
- Alternatives to queuing areas that require people to stand for long periods, for example, buzzer or vibrating personal alarms.
- Adequate circulation space through queuing areas and aisles for people with mobility aids, for example, prams and wheelchairs.

- Self-serve checkout and payment points that are easy to understand, operate and access for a person when standing or seated.
- Low height customer service counters, benches and other installations that incorporate appropriate leg clearance around and underneath.
- An easy to reach and see customer service buzzer installed on any customer service counter.
- A hearing augmentation system where an inbuilt amplification is installed, including at any customer service counter that is screened from the public.
- Effective acoustic environment at staff interaction areas.
- Glare free backgrounds to customer service areas.
- Clear, easy to read, large print product lists and price tags.
- Easy to access condiments, cutlery and serviettes that don't require a person to 'pinch or squeeze'.
- Long reach cord on any EFT machine.
- Easy to see, reach and use vending machines.
- ATMs where stand-alone, that cater for all people, for example, short stature, vision impaired, and that have a clear screen transaction area and audio capacity.
- ATM cash dispenser drawers which are easy to reach, use and see.
- Brochures and information provided in locations that can be reached by a person when standing or seated.
- Movable, firm furniture, including chairs with backs and armrests.
- Various height tables.
- Signage above each aisle detailing items available.
- Self serve and shelving items that can be reached by a person when standing or seated.
- Heavy items located on lower shelving.
- Baskets and trolleys suitable for use by a range of people including an adult with a child and mobility aid.
- Fitting rooms that are large enough to accommodate all users, including a person with a companion, a person with assistance animal or using a mobility aid.
- Shade and shelter over any outdoor display spaces.
- Access to appropriate toilets for all users including people with mobility challenges, for example, ambulant and unisex accessible toilets.

Key access dimensions

Figure 6: Front counter at a leisure centre



1. Maintenance of a clear line of sight between customer service officer and customer
2. Any customer service buzzer or intercom within common reach ranges in accordance with Australian Standards
3. EFT cord 1100 mm minimum length

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach.
- Any customer service buzzer or intercom within common reach ranges in accordance with Australian Standards.
- Customer service counter 830 to 870 mm high with a leg clearance underneath of 800 to 840 mm for a minimum of 900 mm.
- EFT cord 1100 mm minimum length.
- ATM cash dispenser drawer that has a maximum depth and width of 70 mm, and a minimum height of 70 mm.
- Hearing augmentation that covers 80% of the floor area served by inbuilt amplification or 95% of the space if a system using receivers or the like is in use. The number of receivers in use depends on the number of people that the space accommodates.
- Seating with backs and armrests (220 to 300 mm above the seat) at a height of 350 mm - suitable for children, 450 mm - general public use, 520 mm - for older adults.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Australian Bankers Association - Industry Standard - Automatic Teller Machines
- Disability (Access to Premises - Buildings) Standards 2010

Links to other relevant information

- [All buildings](#)
- [All installations](#)
- [Australian Standards](#)
- Wayfinding Design Guidelines and Wayfinding System Audit
- [Access awareness handbooks](#)
- [Australian Hearing](#)
- [The Good The Bad and The Ugly](#) (note that changes due to the introduction of the Disability (Access to Premises - Buildings) Standards 2010 will not be reflected in this resource).

Scoring areas

The following key requirements and access dimensions for scoring areas must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

Key requirements

- A continuous accessible path of travel from the site entry to and through any scoring area.
- Clear, easy to read signage at the entry to the scoring area incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Scoring sheets in large, clear font for ease of use.
- Scoring numbers and letter displays that can be seen from all spectator locations within the facility.
- Effective contrasts between numbers or letters and adjacent surfaces.
- Low height scoring benches with adequate space and leg clearance underneath.

- Scoring systems and equipment incorporating large controls that can be used by a closed fist or open palm.
- Scoring systems and equipment that can be used by a person when standing or seated.
- Visible and audible scoring systems and displays.
- Screens or scoreboards that are capable of displaying public announcements to supplement a public address system.
- Adjustable height microphone with easy to use controls at scoring areas where announcements are made.
- Long connection leads for laptop computer or other scoring and recording equipment to enable use at the scorer's bench if required.
- Controls on appliances, scoring equipment, lighting and power outlets that can be reached by a person when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements.
- Remote controls to operate any scoring equipment and appliances that may be difficult to reach.
- Movable, firm furniture, including seats with backs and armrests.
- Shade and shelter over any external areas where scorers are required to operate from.
- Access to appropriate toilets for all users including people with mobility challenges, for example, ambulant and unisex accessible toilets.

Key access dimensions

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Height of letters / numbers on scoreboards that consider viewing distances in accordance with Australian Standards.
- A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach.
- Large print 18 point Arial or Helvetica font on appliance, control instructions and on scoring numbers and letters.
- Hearing augmentation that covers 80% of the floor area served by inbuilt amplification or 95% of the space if a system using receivers or the like is in use.
- 830 to 870 mm high score benches with a leg clearance underneath of 800 to 840 mm.
- Seating with backs and armrests (220 to 300 mm above the seat) at a height of 350 mm - suitable for children, 450 mm - general public use, 520 mm - for older adults).
- 1900 mm x 2300 mm to a height of 2000 mm minimum pan circulation space incorporating appropriate fixtures and fitting installation in any accessible toilet.

- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 1428.5 - 2010 Design for access and mobility - Communication for people who are deaf or hearing impaired
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [All buildings](#)
- [All installations](#)
- [Australian Standards](#)
- [VicDeaf](#)
- [Vision Australia](#)
- [Access awareness handbooks](#)
- [Australian Hearing](#)

Spectator and viewing areas

The following key requirements and access dimensions for spectator and viewing areas must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

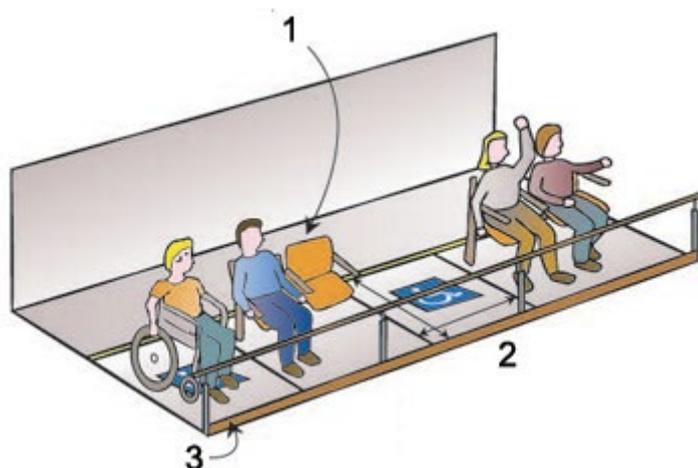
Key requirements

- A continuous accessible path of travel from the site entry to and through any spectator and viewing area.
- Clear, easy to read signage at the entry to the spectator and viewing area incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Viewing areas connected to, but located off the continuous accessible path of travel, so as not to provide an obstruction to path users.
- A raised viewing area for people who need to remain seated, in areas where viewing is predominantly undertaken by people who are standing.

- Accessible seating spaces available in a variety of equitable locations throughout a building or facility, that allow people to sit together, for example, friends and family, person using a wheelchair and person using an assistance animal.
- Rows of seating that have adequate space between them to allow people to easily move through.
- Additional space available next to seating that will allow a person to store items, for example, wheeled luggage and assistance animal.
- Range of seating with backs and armrests.
- Various height seating suitable for children and adults.
- Removable seating with backs and armrests provided in areas of fixed seating.
- Viewing areas that provide clear lines of sight to activities, events or a scene being viewed.
- Accessible paths, ramps, stairs and seating at any temporary viewing area.
- An appropriate kerb and handrail on any raised viewing platform to prevent people from falling or rolling over an edge.
- Where relevant, accessible viewing spaces for people sitting in vehicles, who may have difficulty in leaving the vehicle.
- Alternatives to viewing areas that cannot be accessed by all people, for example, provision of interpretative elements such as audio visual presentations, displays or architectural models, thermoforms and live television links.
- A hearing augmentation system where an inbuilt amplification system is installed.
- Shade and shelter over some viewing and spectator areas that are located outdoors.
- Access to appropriate toilets for all users including people with mobility challenges, for example, ambulant and unisex accessible toilets.

Key access dimensions

Figure 7: Spectator area



1. Seating with backs and armrests (220 to 300 mm above the seat) for example, at a height of 350 mm suitable for children, 450 mm – general public use, 520 mm – for older adults
2. Wheelchair spaces that are a minimum of 850 mm wide (800 mm acceptable if located at the end of a row) and a minimum of 1250 mm deep
3. A minimum 300 mm kerb on raised viewing platforms where required for safety.

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach.
- A minimum 300 mm kerb on raised viewing platforms where required for safety.
- Hearing augmentation that covers 80% of the floor area served by inbuilt amplification or 95% of the space if a system using receivers or the like is in use.
- Wheelchair spaces that are a minimum of 850 mm wide (800 mm acceptable if located at the end of a row) and a minimum of 1250 mm deep (rear approach) 2450 mm deep (front approach). Fixed wheelchair seating spaces located within a building are to be provided in numbers and sizes that are dependent on their location, the size of the room and their approach.
- Seating with backs and armrests (220 to 300 mm above the seat) at a height of 350 mm - suitable for children, 450 mm - general public use, 520 mm - for older adults).
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [All buildings](#)
- [All installations](#)
- [Access awareness handbooks](#)
- [Australian Hearing](#)

Customer service areas

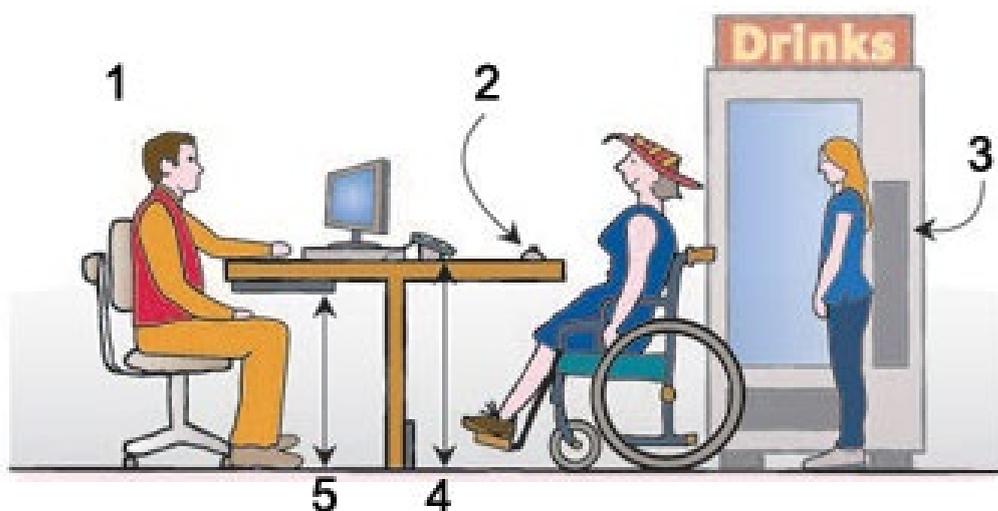
Key requirements

- A continuous accessible path of travel from the site entry to and through any customer service area.
- Clear, easy to read signage at the entry to the customer service area incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Assistance Animals Welcome sticker at entry.
- Alternatives to queuing areas that require people to stand for long periods, for example, buzzer or vibrating personal alarms.
- Adequate circulation space through queuing areas for people with mobility aids (prams/wheelchairs).
- Low height customer service counters, benches and other installations that incorporate appropriate leg clearance around and underneath.
- An easy to reach and see customer service buzzer installed on any customer service counter.
- Long reach cord on any EFT machine.
- A hearing augmentation system where an inbuilt amplification is installed at any customer service counter that is screened from the public.
- Effective acoustic environment at staff interaction areas, for example, if provided, low level background music that is appropriate for all users.
- Glare free backgrounds to customer service areas.

- Remote controls to operate all equipment and appliances that may be difficult to reach, for example, photocopiers and televisions.
- Brochures provided in locations that can be reached by a person when standing or seated.
- Various height or adjustable tables if meetings are conducted in the area.
- Any self serve and shelving items that are can be reached by a person who is standing or seated.
- Movable, firm furniture, including chairs with backs and armrests.
- Carpet or tiling laid to assist with way finding to the customer service area.
- Easy to see, reach and use vending machines, for example, ticket dispensers in queues that can be used by a person when standing or seated.
- Visible and audible alternatives for announcements and notifications.
- Access to appropriate toilets for all users including people with mobility challenges, for example, ambulant and unisex accessible toilets.

Key access dimensions

Figure 8: Front counter in a customer service setting



- | | |
|---|---|
| 1. Lighting installed to required lux levels in accordance with the range in Australian Standards | 4. Customer service counter, benches or tables with a leg clearance underneath of 800 to 840 mm |
| 2. Any customer service buzzer or intercom within common reach ranges in accordance with Australian Standards | 5. Customer service counter, benches or tables 830 to 870 mm high for a minimum of 900 mm |
| 3. Controls on any vending machine 500 – 1200 high above floor level | |

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach.
- Any customer service buzzer or intercom, display and information stands within common reach ranges in accordance with Australian Standards.
- Customer service counter, benches or tables 830 to 870 mm high with a leg clearance underneath of 800 to 840 mm for a minimum of 900 mm.
- Hearing augmentation that covers 80% of the floor area served by inbuilt amplification or 95% of the space if a system using receivers or the like is in use. The number of receivers in use depends on the number of people that the space accommodates.
- Signage installed indicating the area covered by a hearing augmentation system, that is, 80 or 95%, the type of system that is in place, and if receivers or the like are in use, the location where the receivers can be obtained.
- Controls on any vending machine 500 to 1200 mm high.
- EFT cord 1100 mm minimum length.
- Seating with backs and armrests (220 to 300 mm above the seat) at a height of 350 mm - suitable for children, 450 mm - general public use, 520 mm - for older adults.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [All buildings](#)
- [All installations](#)
- [Australian Standards](#)
- [Vision Australia](#)
- Wayfinding Design Guidelines and Wayfinding System Audit
- [Access awareness handbooks](#)
- [Building Sight](#)
- [Australian Hearing](#)
- [The Good The Bad and The Ugly](#) (note that changes due to the introduction of the Disability (Access to Premises - Buildings) Standards 2010 will not be reflected in this resource).

Hearing augmentation

The following key requirements and key access dimensions for hearing augmentation must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

Key requirements

- Hearing augmentation provided where inbuilt amplification is installed in any auditorium, hall, meeting or conference room, or lift, where a public address system is installed.
- Hearing augmentation provided at any ticket office, enquiry, cashier or reception area where the public is screened from the service provider.
- Signage indicating the area covered by the hearing augmentation system incorporating the international symbol of deafness, for ease of identification by users.
- Type of hearing augmentation system, in other words, can be built-in or portable that can be moved from room to room, is dependent on the size of the area to be covered, as well as potential external influences, for example, excessive noise.
- Acoustic design elements in buildings and facilities that assist in reducing background noise, particularly in indoor areas such as reception counters, public meeting areas, social interchange points, information and cashier areas.
- Provision of the following installations to minimise background noise levels within buildings:
 - rubber tips on furniture legs
 - soft furnishings
 - low pile carpet
 - heavy curtains and wall hangings
 - automatic doors closures

- double glazing on windows
- use of shrubs, trees or high, solid fences to limit traffic noise
- provision of quiet areas for conversations with users
- quiet air conditioners, fans and office equipment
- acoustic treatments to walls and ceilings.
- Seating with backs and armrests that provides good lines of sight to speakers, presenters or performers to assist people who may be lip reading.
- Visible emergency alarms, in addition to audible emergency alarms.
- Controls for hearing augmentation that can be reached by a person when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements.
- Consistent and even lighting over the space covered by any hearing augmentation (reflected downward - without pooling or providing glare).
- Provision of 'sign language interpreters' at public meetings and performances, as required.
- Provision of management practices to ensure noise generated by specific activities (exercise classes, aerobics and social activities) is limited and contained to reduce the impact inside and outside premises.
- Provision of captions or text information on any visual or audible data presentations, for example, DVDs, televisions, scoreboards and notice boards.

Key access dimensions

Figure 9: Braille and tactile signage indicating presence of a hearing loop



1. Signage including the international symbol for deafness indicating the area covered by a hearing augmentation system, as per Australian Standards

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage and operating instructions installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Hearing augmentation that covers 80% of the floor area served by inbuilt amplification, or 95% of the space if a system using receivers or the like is in use. The number of receivers in use depends on the number of people that the space accommodates.

- Signage including the international symbol for deafness indicating the area covered by a hearing augmentation system, that is, 80 or 95%, the type of system that is in place, and if receivers or the like are in use and the location where the receivers can be obtained.
- Provision of hearing augmentation that meets the field strengths required by Australian Standards.
- Minimum 30% luminance contrast between hearing augmentation system controls and background and adjacent surfaces.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 1428.5 Design for access and mobility - Communication for People who are Deaf or Hearing Impaired
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS 1680 - 2009 Interior Lighting - Safe Movement
- AS 1735 Lifts, Escalators and Moving Walks
- AS 1670.4 - 2004 Fire detection system design, installation and commissioning - Sound Systems and Intercom Systems for emergency purposes
- AS 4428.4 Fire detection, warning, control and intercom systems - Control and indicating equipment - Intercommunication systems for emergency purposes
- AS 60118.4 Design for magnetic field strength in Audio - frequency induction loops for hearing purposes
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Australian Standards](#)
- [VicDeaf](#)
- [Access awareness handbooks](#)
- [Australian Hearing](#)

First aid rooms

First aid rooms should be available for use by everyone. Access to any first aid equipment and other fixtures, such as basins, change tables or toilets is necessary. A supply of hot and cold water is important.

Where possible, a first aid room should be located close to toilets and change rooms.

The following key requirements and access dimensions for first aid rooms must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

Key requirements

- A continuous accessible path of travel from the site entry to and through any first aid room.
- Clear, easy to read signage at the entry to the first aid room incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Clear, concise signage with a large size number or name at the entrance to the first aid room.
- Wide waiting areas outside the first aid room to enable people to wait outside without interrupting the flow of pedestrian traffic through the rest of the building.
- A low height bench and sink (if installed in the first aid room) that incorporates appropriate leg clearance underneath.
- Lever or sensor operated taps in any wet areas.
- Hot and cold water facilities (provided through a mixing spout) that can be used by a person when standing or seated.
- Access to appropriate toilets for all users including people with mobility challenges, for example, ambulant and unisex accessible toilets.

Key access dimensions

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach.
- Tables that are of varying heights 730 to 870 mm above floor level with appropriate leg clearance underneath.
- Sink 770 to 800 mm high with 640 to 650 mm leg clearance underneath
- Hot and cold water facilities with highest operable components at 900 to 1100 mm (delivered through a mixing spout for easy regulation of temperature).

- Seating with backs and armrests (220 to 300 mm above the seat) at a height of 350 mm - suitable for children, 450 mm - general public use, 520 mm - for older adults).
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Buildings
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [All buildings and All installations](#)
- [Australian Standards](#)
- [Emergency Egress Procedures](#)
- [Access awareness handbooks](#)
- [Livable Housing Australia](#)
- [The Good The Bad and The Ugly](#)

Fire extinguishers and alarms

The following key requirements and key access dimensions for fire extinguishers and alarms must be considered in addition to those for all installations.

Key requirements

- Emergency management plan installed at a height that can be read by a person when standing or seated, and incorporates information, (including international symbols of access or deafness where relevant), regarding continuous accessible paths of travel to nominated emergency assembly areas for all people.
- Visible and audible emergency alarms.
- Variety of fire extinguishers for range of emergency situations.
- Various size fire extinguishers for ease of use by all people.
- Emergency alarms that can be activated without the need for excessive force.
- Personal emergency alarms for any staff working in a building who may not be able to easily operate fire extinguishers or fixed alarms.

Key access dimensions

- Appropriate reach ranges and controls in accordance with Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Material
- AS 3745 - 2010 Planning for emergencies in facilities.

Links to other relevant information

- [All installations](#)
- [Emergency exits](#)
- [Australian Standards](#)
- [Emergency Egress Procedures](#)
- Wayfinding Design Guidelines and Wayfinding System Audit
- [Australian Hearing](#).

Emergency Exits

Key requirements

- Continuous accessible path of travel to and through all buildings and facilities leading to a nominated emergency assembly area.
- Clear access to emergency exit doors free of any obstructions.
- Appropriate emergency exit signs at doors and additional low level emergency exit signs that can still be seen in the event of rising smoke.
- Supplementary directional signage (illuminated as appropriate) to assist in identifying emergency exits.
- Path surfaces at exit points that are of a different colour, texture or material to assist people with recognition.
- Audible and visible emergency alarms throughout all buildings and facilities.
- Controls on emergency alarms that can be activated by a person who is standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements.
- Easy to reach and use fire extinguishers.
- A clearly signed accessible alternative to any lift, in the event of a lift breakdown or inability to use lifts in an emergency.
- A place of refuge on levels above ground for a person with limited mobility.

- If more than one level, a stairway (within or associated with any building) that is reserved for emergency exit.
- Availability of emergency evacuation chair for use by people with limited mobility.
- A sprinkler system that covers all spaces within any building.
- Details of people who may require assistance in an emergency, available to building fire warden.
- Emergency evacuation plans that can be read by a person when standing or seated and identifying the location of accessible paths of travel to nominated assembly areas for both ambulant and non-ambulant users.
- Emergency procedures provided in a variety of formats, incorporating international symbols of access or deafness where relevant, for example, large print, tactile, Braille.
- Consistent and even lighting (reflected downward - without pooling or providing glare) and signage along pathways or corridors to any emergency exit and assembly area.
- Lighting at the exit that has a higher lux level than the surrounding lighting to assist with identification and safety.

Key access dimensions

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide to exits.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at exits with circulation space on both sides, that considers angles of approach and incorporates level landings (including the operative leaf of a multiple leaf door).
- Maximum rise of 35 mm, 280 mm length and gradient of 1:8 at any threshold ramps.
- Step ramps to meet circulation spaces and angles of approach at doorways in accordance with the range in Australian Standards.
- Solid strip a minimum of 75 mm wide installed with the lower edge at a height of 900 to 1000 mm above floor level across the width of any fully glazed door.
- A preferred maximum force of 20N at the exit door handle to open doors and door closers that are adjustable.
- D or D type lever style door handles on any doors requiring handles at 900 to 1100 mm high.
- Push button controls that are a minimum of 25 mm diameter and sit proud of the wall surface.
- Door controls and switches that need to be grasped or turned at 900 to 1100 mm high.
- Door controls that only need to be touched at a height of 900 to 1250 mm and not less than 500 mm from an internal corner.
- Door controls that only need to be pushed, for example, panic bars on egress routes at a height of 900 to 1200 mm.

- Door controls that are manually operated for power operated exit doors, at a height of 900 to 1100 mm, no closer than 500 mm from an internal corner.
- Door handles with 35 mm and not more than 45 mm clearance between the handle (in the centre) and the back plate or door face.
- A pull bar or handrail at a height of between 900 to 1100 mm on any outward opening door that is not self-closing.
- Sliding exit door handles a minimum of 60 mm from the door jamb or door stop when closed/open.
- Snibs with a lever handle a minimum of 45 mm from the centre of the spindle.
- Minimum 35 mm wide buttons or switches for exit controls, proud of surrounding surfaces.
- A minimum distance of 1450 mm between exit doorways within an airlock or vestibule, plus the door leaf width if the door opens into the space
- Fire extinguishers and fire alarms that are located so the operable component is within appropriate reach ranges in accordance with Australian Standards.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Minimum 30% luminance contrast between doors, doorway, controls and background and adjacent surfaces.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 1680 - 2009 Interior Lighting - Safe Movement
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS 1670.4 - 2004 Fire detection system design, installation and commissioning - Sound Systems and Intercom Systems for Emergency Purposes
- AS 2293.1 - 2005 Emergency escape lighting and exit signs for buildings - System Design, Installation and Operation
- AS 4428.4 -2004 Fire detection, warning, control and intercom systems - Control and Indicating Equipment - Intercommunication Systems for Emergency Purposes
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Floor and ground surfaces](#)
- [Fences, gates and bollards](#)
- [Keys, keypads and padlocks](#)
- [Lighting and contrasts](#)
- [Baffles and screens](#)
- [Shade and shelter](#)
- [Signage and wayfinding](#)
- [Australian Standards](#)
- [Emergency Egress Procedures](#)

3.3 Landscape design

There are a number of general key requirements and key access dimensions to consider for all installations, in order to maximise use for everyone.

General key requirements

A continuous accessible path of travel should be provided from any car park, public transport, taxi set down area and property boundary to, around and next to all installations within a site, to support access and use by everyone. This route can consist of pathways, roadways, pedestrian crossings and ramps. It cannot incorporate any step, stairway, turnstile, revolving door, escalator, moving walk other impediment. Key requirements to consider for all installations include:

- a continuous accessible path of travel from the property entrance onsite or associated car park to, around and next to the installation and connected to other onsite buildings and installations
- clear, easy to read signage and operating instructions, incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements
- installation located on firm, level, slip resistant ground surface, in both wet and dry conditions
- space to approach the installation from both the front and side
- space next to the installation for a person using a mobility aid to stop without obstructing the pathway
- installation connected to, but set back from the pathway
- installation designed with operative components, including controls that can be reached by a person when standing or seated, used with a closed fist or open palm and incorporating raised tactile and Braille elements
- shade and shelter over the installation and any associated elements

- installation at a height suitable for use by a person when standing or seated and incorporating adequate leg clearance underneath
- effective contrasts between installation and background and adjacent surfaces
- consistent and even lighting (reflected downward - without pooling or providing glare).

Key access dimensions

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide for an ambulant person, 1200 mm wide for a person using a wheelchair, 1500 mm wide for 2 people to pass each other easily and 1800 mm wide for a person using a wheelchair to turn 180 degrees.
- Signage and operating instructions installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Circulation around the installation that allows for a person to approach from a variety of angles (minimum 800 mm x 1300 mm).
- Installation connected to, but setback a minimum of 500 mm from any pathway.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Minimum 30% luminance contrast between installation and background and adjacent surfaces.
- Lighting over the installation to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for all buildings

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Buildings
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 1428.3 – 1992 Obsolescent June 2012 Design for access and mobility - Requirements for Children and Adolescents with Physical Disabilities
- AS/NZS 1428.4.1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Lighting and contrasts](#)
- [Tracks and pathways](#)
- [Signage and wayfinding](#)
- [Baby change areas](#)
- [Baffles and screens](#)
- [Bicycle storage and racks](#)
- [Boom gates and entry control points](#)
- [Car parking](#)
- [Fences, gates and bollards](#)
- [Toilets - Accessible, ambulant and portable](#)
- [Family change areas](#)
- [Showers](#)
- [Vehicle guard rails and wheel stops](#)
- [Stairs](#)
- [Spectator and viewing areas](#)
- [Access awareness handbooks](#)
- [Australian Standards](#)
- [Building Sight](#)
- [Centre for Universal Design USA](#)
- [Livable Housing Australia](#)
- [Good Playspace Guide: "I can play too"](#)
- [Vision Australia](#)
- Wayfinding Design Guidelines and Wayfinding System Audit
- [Australian Hearing](#)

Barbecues

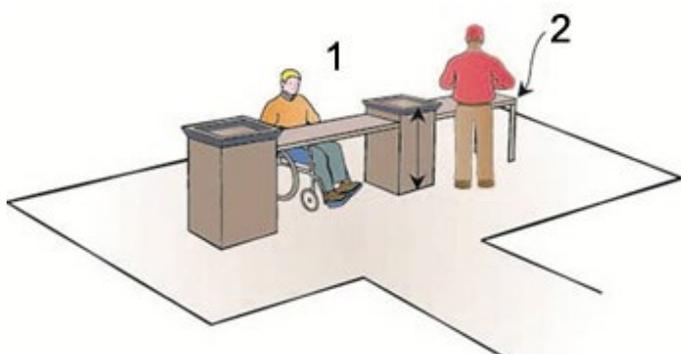
The following key requirements and key access dimensions for barbecues must be considered in addition to those for all installations.

Key requirements

- Easy to see and use controls at the front of the hot plate that can be reached by a person when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements.
- Coin feed points that are easy to see and reach and alternatives to these where possible.
- Some low height benches with adequate leg clearance underneath, adjacent to the barbecue hot plate.
- Bench with a heat resistant surface adjacent to the hot plate, without any lip, to allow for cooking pans to be moved off the hot plate without the need to lift.
- Low height sinks (if sinks provided) with adequate leg clearance underneath and incorporating lever or sensor operated taps.

Key access dimensions

Figure 10: Barbecue area



1. Top of the barbecue hotplate at a height between 830 to 870 mm above the floor or ground level
2. Low height benches with adequate leg clearance underneath, adjacent to the barbecue hotplate

- Top of the barbecue hotplate at a height between 830 to 870 mm above the floor or ground level with leg clearance at a height of 800 to 840 mm underneath for minimum of 900 mm.
- Coin feed slots 800 to 900 mm high.
- Benches that are adjustable or have a section at a height between 830 to 870 mm above floor or ground level with leg clearance at a height of 800 to 840 mm underneath for minimum of 900 mm.
- Sink 770 to 800 mm high with 640 to 650 mm leg clearance underneath.
- Appropriate reach ranges and controls in accordance with Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Buildings
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities.

Links to other relevant information

- [All installations](#)
- [Access awareness handbooks](#)
- [Australian Standards](#)
- [Access awareness handbooks.](#)

Drinking fountains

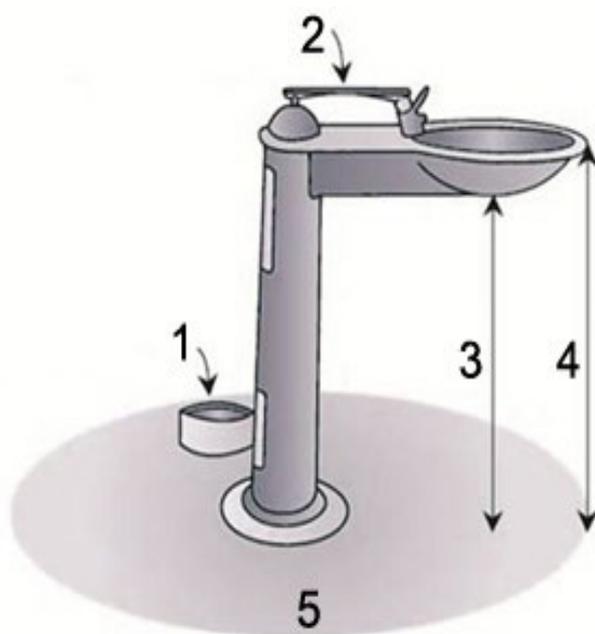
The following key requirements and key access dimensions for drinking fountains must be considered in addition to those for all installations.

Key requirements

- Located in an area that has appropriate drainage to ensure that any water spillage does not create an unstable, wet ground surface.
- Easy to access water outlet at the front of the drinking fountain bowl removing the need to stretch and lean over bowl to access water.
- Water receptacle located close to the ground, at rear of drinking fountain for use by companion or assistance animals.
- Controls that are easy to reach and use (for example, lever) with fist, open palm.

Key access dimensions

Figure 11: Drinking fountain



1. Water receptacle located close to the ground at rear of drinking fountain for use by companion or assistance animals
2. Operating force of button / control no more than 19.5N (lever or sensor preferred)
3. Height to bottom of bowl 640 to 650 mm
4. Height of top of bowl 695 to 700 mm
5. Ensure location considers multiple angles of approach

- Appropriate reach ranges to the drinking fountain, in accordance with Australian Standards.
- Height of top of bowl 695 to 700 mm.
- Height of bottom of bowl 640 to 650 mm.
- Depth under bowl 490 to 500 mm.
- Circulation space around unit minimum 1500 mm either side of, and to rear of fountain, which allows a user to circle unit as necessary with an assistance animal if required.

- Operating force of button no more than 19.5N (lever or sensor preferred).
- Bowl, arm, frame and bubbler to have a satin finish to reduce reflection and glare.
- Bubbler to be as close as possible to the front of the unit and able to direct water flow to a height of 80 to 100 mm.
- Surrounding grates are to run at a right angle to direction of travel with a maximum 13 mm wide x 150 mm long openings.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials.

Links to other relevant information

- [All installations](#)
- [Access awareness handbooks](#)
- [Australian Standards.](#)

Litter bins

The following key requirements and key access dimensions for litter bins must be considered in addition to those for all installations.

Key requirements

- An opening that is located at the front of the litter bin which is easy to locate and open (not too heavy) (foot operated, in addition to swing or push operation at opening point, is preferred).
- Opening that can be reached by a person when standing or seated.
- Litter bins installed at regular intervals along pathways with co-located installation, for example, seating, lighting, barbecue areas and bike storage.
- A consistent distribution of litter bins in large open areas, eliminating the need to carry rubbish for long distances.
- Contrasting colours and symbols to designate bin uses, for example, recyclable and waste.

Key access dimensions

- Appropriate reach ranges and controls in accordance with Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities.

Links to other relevant information

- [All installations](#)
- [Access awareness handbooks](#)
- [Australian Standards](#).

Seating and tables

Seating and tables may be required at a range of locations. Seating in parks and along pathways for example, should incorporate a range of seats with backs and arm rests with various seat heights to supports both children and adults. These seats should also incorporate an adjacent wheelchair space so that people can move off a path of travel and sit with others using the seats.

Seating is also required in stadiums and sports facilities for spectators using wheelchairs or other mobility aids. Accessible seating and wheelchair seating spaces should be integrated with other seating to ensure everyone including family, friends or carers can sit together and enjoy the event.

Seats should incorporate backs and arm rests and as well as adjacent wheelchair spaces. Spaces for people using wheelchairs should not be segregated from other people and should not be provided in one location only. A variety of seating options should be available at a number of locations. Clear lines of sight should be maintained from all seating to allow for ease of viewing of the installation or activity that is taking place.

Picnic tables located on a firm, level, slip resistant ground surface that provide a variety of access points (e.g., end or side are also important. A continuous accessible path of travel is required to accessible seating and tables).

The following key requirements and key access dimensions for seating and tables must be considered in addition to those for all installations.

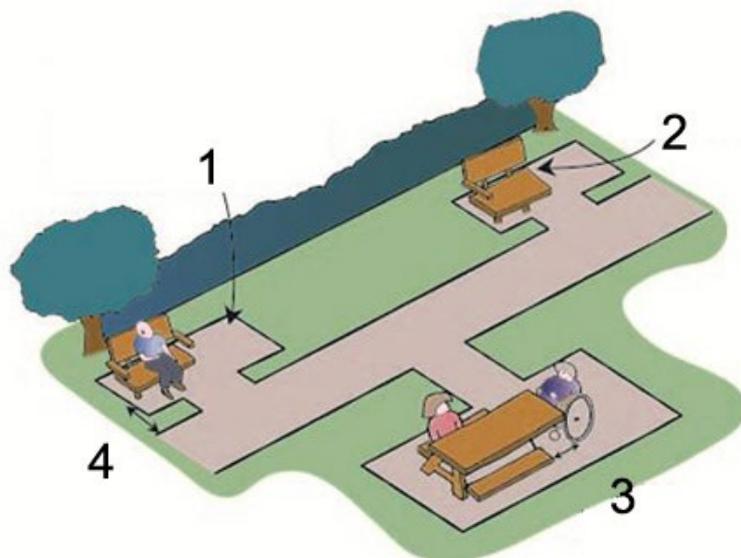
Key requirements

- Seating and tables that are installed at regular intervals with co-located facilities (for example, rubbish bins and bike racks).
- Various height seats suitable for all people including older adults and children which are free of materials that can splinter.

- Seating with backs and armrests of various configuration (for example, one armrest, armrests either ends and central armrest).
- Seating and table materials that do not retain heat or cold.
- Seating and tables that incorporate clear, level circulation space that allows room for the placement of items, for example, pram to rest, dog to sit, person using wheelchair to sit next to seat.
- Additional 'overflow' seating incorporated into landscaped areas, for example, walls.
- Movable seating provided at reception, restaurant, kiosks, recreation facilities, retail areas and in accessible showers, incorporating backs and armrests.
- Wheelchair seating spaces provided where fixed seating is available.
- A change of texture or ground surface colour at seating and tables to designate the area.
- Tables that have rounded edges and that are free from materials that can splinter.
- Tables incorporating an extended end with adequate space for a person to move in underneath when seated.
- Where fixed seating is installed at tables, space at one end or side of the table for a person to easily move in and underneath, if using a wheelchair.
- Accessible spectator seating and wheelchair spaces at a variety of locations within relevant buildings and facilities, so users can sit with family and friends.

Key access dimensions

Figure 12: Seating and table connected to a pathway



1. Seating that incorporates clear, level circulation space that allows room for the placement of items, e.g. pram to rest, dog to sit, person using wheelchair to sit next to seat
2. Seating with backs and armrests (220 to 300 mm above the seat) for example, at a height of 350 mm – suitable for children, 450 mm – general public use, 520 mm – for older adults
3. Tables incorporating an extended end with adequate space for a person to move in underneath when seated
4. Seating connected to but set back from path minimum of 500 mm

- Seating installed at a minimum of 60 m intervals along pathways.
- Minimum 900 mm between seating and tables that are placed side by side.
- Various height seating 450 to 520 mm with backs and armrests (top installed 220 to 300 mm above seat) – 450 mm adults, 520 mm older adults. If children are expected to be a primary user, a seat height of 350 mm will assist.
- Landscaped seating at least 300 mm wide with an overhang of 100 mm to allow a person to place their heels on the ground when getting up from the seat.
- Fixed wheelchair seating spaces provided and located within a facility that meet the size and ratio of the space served in accordance with Australian Standards.
- A minimum circulation space of 1500 mm around a table to allow a person to maneuver easily.
- Minimum depth of 620 mm under a table for a person using a wheelchair and if 2 spaces are located opposite on the same table, the table needs to be at least 1240 mm deep with a height under the table a minimum of 800 mm.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities

Links to other relevant information

- [All installations](#)
- [Access awareness handbooks](#)
- [Australian Standards](#).

Shade and shelter

The following key requirements and key access dimensions for shade and shelter must be considered in addition to those for all installations.

Key requirements

Shade and shelter, both above and around (vertical and horizontal), to protect all users from extremes of weather at the following external installations:

- accessible car parking
- ball courts
- barbecues
- bicycle storage and racks
- camp sites
- entrances to buildings and facilities
- notice boards
- outdoor seating
- pathways leading to customer service areas
- playspaces
- spectator seating
- swimming pools and spas
- transport set down and waiting areas
- vending machines
- viewing areas.
- Use of the natural environment where possible, for example, bushes, large stable rocks, shrubs that do not drop excessive debris.
- Pathways that extend beyond the areas of shade to ensure the flow of pedestrian traffic is not interrupted.
- Maintenance of a clear path of travel through any shelter or infrastructure.

- Shade and shelter points connected to paths of travel to provide appropriate access.
- Shade and shelter points that consider the size and space requirements of all users, for example, parents with prams, person with assistance animal or using a wheelchair.

Key access dimensions

- A minimum 2000 mm overhead clearance on any path of travel where shade or shelter is provided.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities.

Links to other relevant information

- [All installations](#)
- [Access awareness handbooks](#)
- [Good Playspace Guide: "I can play too"](#).

Landscape design

The following key requirements and key access dimensions for landscape design must be considered in addition to those for all installations particularly as they relate to landscape installations, for example, sculptures, arbours, water features or other structures.

The following key requirements and key access dimensions for fire extinguishers and alarms must be considered in addition to those for all installations.

Key requirements

- Signage indicating key landscaping elements which are available for people to experience, for example, sculptures, arbours and garden beds.
- A continuous accessible path of travel from any car park, public transport and taxi set down area and property boundary through any landscaping elements along pathways.
- Entrances and pathways which are free from plant and tree droppings, leaves, seed pods, bark or any plants that attract insects or have prickles and thorns.
- Garden beds with raised sections to support access for all users, including a person when be standing or seated.
- Landscaping elements that do not drop excessive debris, used to shade key elements in outdoor areas, for example, playspaces and seating.
- Landscaping elements along pathways and around elements that do not encroach into lines of sight for users of the area, for example, children, older adult, person who is deaf.

- Landscaping elements incorporating an effective contrast between vertical and horizontal surfaces and background and adjacent surfaces, for example, raised garden beds and plant surrounds.
- Adequate overhead and side clearance along pathways ensuring no landscape elements or installations, for example, sculptures, arbours, garden, water fountains encroach.
- Landscaping elements and installations that consider and assist with way finding, for example, colour and scent cues, structures at entry and exit points, and defined pathway edgings.
- Change of ground surface colour or material to assist people to identify key elements in landscaped areas, for example, seating, shelter and barbecues.

Key access dimensions

Figure 13: Door entrance



1. Appropriate reach ranges and controls in accordance with Australian Standards
2. Raised garden beds that are between 750 to 850 mm high with leg clearance underneath a minimum of 600 mm high and 750 mm deep

- A continuous accessible path of travel that is a minimum of 2000 mm high and 1000 mm wide for an ambulant person, 1200 mm wide for a person using a wheelchair, 1500 mm wide for 2 people to pass each other easily and 1800 mm wide for a person using a wheelchair to turn 180 degrees.
- Signage and operating instructions at landscape installations within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Circulation around any landscape installations that allows for a person to approach from a variety of angles (minimum 800 mm x 1300 mm).
- Landscape installations connected to, but setback a minimum of 500 mm from any pathway.
- Minimum 30% luminance contrast between landscape installations and background and adjacent surfaces.
- Maximum height at top of hedges or similar fences 1050 mm above ground level.
- Raised garden beds that are between 750 to 850 mm high with leg clearance underneath a minimum of 600 mm high and 750 mm deep.
- Appropriate reach ranges and controls in accordance with Australian Standards.

- Lighting over any landscape installations to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials

Links to other relevant information

- [All installations](#)
- [Access awareness handbooks](#)
- [Australian Standards](#)
- [Building Sight](#)
- [Sightline](#)
- Wayfinding Design Guidelines and Wayfinding System Audit

3.4 Lighting and contrasts

Key requirements

- Consistent and even lighting along pathways, installations, car parking and set down areas, at vehicle and pedestrian conflicts, entrances to all buildings and facilities, customer interaction points and inside all buildings and to signage.
- Consistent and even lighting (reflected downward - without pooling or providing glare).

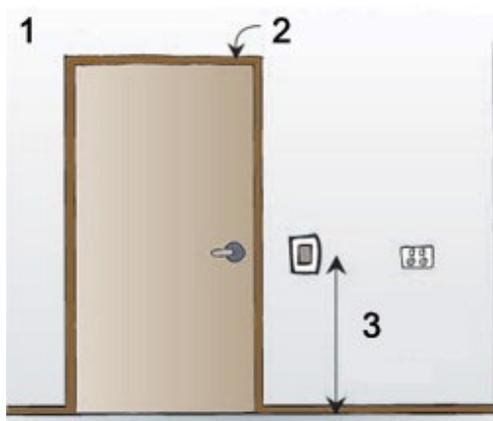
If access to controls are required:

- lighting installations located on firm, level, slip resistant ground surface, in both wet and dry conditions and space to approach the installation from both the front and side
- space next to the installation for a person using a mobility aid to stop without obstructing the pathway
- lighting installations connected to, but set back from the pathway
- lighting installations designed with operative components, including controls, that can be reached by a person when standing or seated, used with a closed fist or open palm and incorporating raised tactile and Braille elements
- shade and shelter over the lighting controls and any associated elements.
- any portable lighting installations at a height suitable for use by a person when standing or seated and incorporating adequate leg clearance underneath.
- Limited use of fluorescent tubing due to the noise created and possible interference to a person using a hearing aid.

- Automated control systems with sensors to adjust artificial light when needed.
- Portable lighting, lamp available upon request.
- Appropriate lighting at customer interaction areas that does not create glare, to support a customer who may need to read customer service officers' lips if required.
- Use of a lighting system that can be linked to an emergency warning system to activate a visible emergency alarm, assisting a person who is deaf or hard of hearing.
- Effective emergency lighting to and at emergency exits and along paths of travel to nominated emergency assembly areas.
- Optimal use of natural light where available, supplemented with artificial lights as needed.
- Appropriate shading available for diffusing natural light when needed.
- Effective contrasts between installations, fixtures, fittings, door frames and edges, furniture and other elements (in both internal and external locations) and background and adjacent surfaces.

Key access dimensions

Figure 14: Lighting and contrast at a doorway



1. Optimal use of natural light where available, supplemented with artificial lights as needed
2. Contrast at door a minimum 50 mm wide, 30% luminance
3. Switches and controls 900 to 1100 mm above floor level

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage and operating instructions installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Circulation around the lighting installation that allows for a person to approach from a variety of angles (minimum 800 x 1300 mm).
- Lighting installation connected to, but setback a minimum of 500 mm from any pathway.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Minimum 30% luminance contrast between all installations, fixtures and fittings and background and adjacent surfaces.
- Light switches 900 - 1100 mm high.

- General purpose outlets 600 – 1100 mm high and not less than 500 mm from any internal corners within accessible sanitary facilities.
- Minimum 30 mm x 30 mm buttons or switches for lights.
- Lighting at parking bays to be directed over any accessible bay from 2 directions.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 1428.4.1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Access awareness handbooks](#)
- [Australian Standards](#)
- [Building Sight](#)
- [Vision Australia.](#)

3.5 Toilets and change rooms

Toilets (accessible, ambulant and portable)

Toilets are required to comply with the Disability (Access to Premises – Buildings) Standards 2010.

The Australian Standard AS1428.1 is referenced by the Disability (Access to Premises – Buildings Standards) 2010. This requires existing toilets to comply with AS 1428.1:2001.

However, the updated Standard AS 1428.1 2009 requires a larger pan circulation space for toilets in new buildings and buildings undergoing significant upgrade, if the existing toilet is affected by the upgrade works and does not comply with AS 1428.1 2001. If it does not comply with this Standard it will need to be upgraded to the newer version. Further details can be found in the Disability (Access to Premises – Buildings) Standards 2010.

The following key requirements and access dimensions for toilets must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

Key requirements for all toilets

- A range of toilets including standard, unisex accessible and ambulant toilets that can be used by people with a range of needs on each floor of a building that has standard toilet cubicles, for example, parent with pram or a person using a wheelchair.
- Consideration given to the building use and expected gender use, that is, more toilet facilities provided for females or males if required.
- A continuous accessible path of travel from the site entry and any onsite car park to and through any toilet area.
- Clear, easy to read signage at the entry to any toilets incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Cubicles that are deep enough to allow a person to take a mobility aid into the cubicle, for example, wheeled luggage and shopping jeep.
- Unisex accessible toilets that can be used by people of opposing gender, for example, father with daughter, mother with son or husband with wife.
- Unisex accessible toilets suitable for use by both left and right handed users, including both children and adults.
- A level transition or an appropriate threshold or step ramp at the entry door.
- Wide doorway (self-opening preferred), that is not heavy or hard to open and provides adequate circulation space.
- Toilet door that can be easily opened from outside (emergency use).
- Wide screen style entrances that eliminate the need for doors on access pathways to toilets, where possible.
- Airlocks that are easy for all users to move through, for example, person using wheelchair, pram and assistance animal.
- Floor surfaces that are slip resistant in both wet and dry conditions.
- Controls on fixtures, fittings, toilets that can be reached by a person when seated on the toilet and that are easy to see and use with a closed fist or open palm, for example, flushing controls and toilet paper holder.
- Effective contrasts between vertical and horizontal surfaces around toilet door, fixtures, fittings, benches, toilets and signage.
- Full, round, secured toilet seat in contrast to the background (for example, pan, wall or floor).
- An adjustable height toilet seat.
- Hand basin that has an appropriate depth and is installed at an appropriate height with leg clearance underneath (located within any unisex accessible toilet).
- Hand basin with lever or sensor operated taps, within reach of a person when standing or seated.
- Controls on fixtures and fittings on hand basins that can be reached by a person when seated and that are easy to see and use with a closed fist or open palm, for example, soap dispenser, hand dryer, lever or sensor operated taps.

- Shelf next to a hand basin for the placement of personal items.
- Mirror, clothes hanging device, rubbish bins, sanitary or any disposal units that can be used by a person when standing or seated.
- Baby change facility that is usable by all people but does not encroach on the required circulation space within a unisex accessible toilet (placement near entry point will ensure it is closed prior to vacating).
- Audible and visible emergency alarms.
- Fly wire screens on any windows.
- Consistent and even lighting (reflected downward - without pooling or providing glare) over key elements within the space.
- Toilets that are maintained to be clean and odour free.

Accessible Toilets

- Signage that identifies if the toilet is suitable for left or right hand use.
- An emergency alarm installed within reach of the pan.
- Appropriate grab rails installed at the side and rear of the pan.

Ambulant Toilets

- Appropriate grab rails installed at the side and rear (where not obstructed by cistern) of the pan.

Portable Toilets

- Level or ramp access.
- Adequate circulation space.
- Easy to use door handles.

Key access dimensions

- A continuous accessible path of travel that is a minimum 1000 mm wide and 2000 mm high (1980 mm at doorways) to and through any toilet area.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Braille and tactile signage installed on the latch side of the door at a height of between 1200 to 1600 mm.
- A minimum 850 mm clear opening width at doors (including active leaf) with circulation space provided at both sides of door that considers angles of approach and does not impede on the use of elements within the facility, for example, a basin.
- Maximum rise of 35 mm, 280 mm length and gradient of 1:8 at any threshold ramp.
- D or D lever style door handles 900 to 1100 mm high and an occupied indicator.
- A maximum force of 20N at the door handle to open doors.

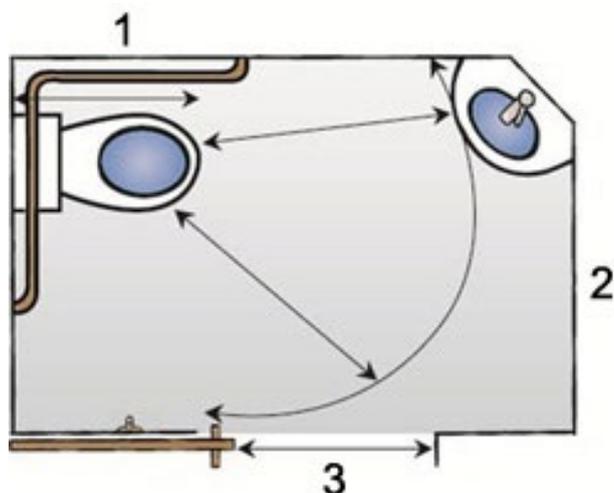
- Minimum 30% luminance contrasts between doorways, walls, fixtures, fittings and background and adjacent surfaces.
- Airlocks that meet the requirements of Australian Standards to an accessible toilet and an ambulant toilet.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Accessible toilet (existing)

- A minimum 1600 mm x 2000 mm to a height of 900 mm pan circulation space.
- 450 to 460 mm centreline of pan from adjacent wall.
- 460 to 480 mm top of seat above floor.
- 790 to 810 mm front of pan to rear wall.
- A minimum of 950 mm at side of pan.
- A minimum of 1200 mm at front of pan (1100 mm to basin).
- A maximum 300 mm forward of pan and 700 mm high toilet paper holder.
- 1100 mm maximum height flushing control.
- 770 to 800 mm maximum height hand basin top edge with appropriate leg clearance underneath.
- 900 to 1100 mm maximum height soap dispenser, hand dryer.
- 900 to 1850 mm maximum height mirror.
- 1250 to 1350 mm maximum height clothes hanging device.
- 30 to 40 mm diameter grab rails installed at a height of 800 to 810 mm with an appropriate length, distance from adjoining surfaces and angle of installations.

Accessible toilet (new)

Figure 15: Overhead view of an accessible toilet

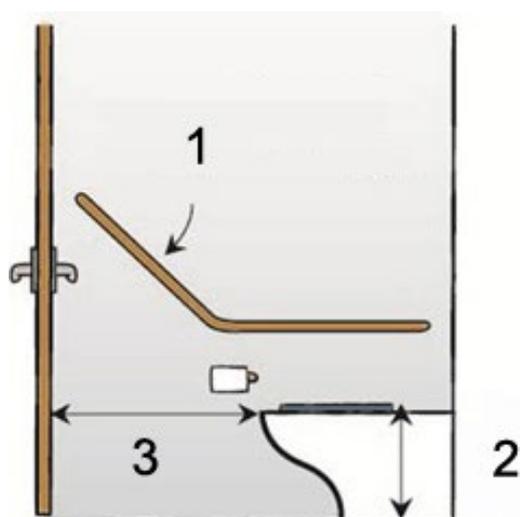


1. 790 to 810 mm front of pan to rear wall
2. A minimum 1900 x 2300 mm to a height of 2000 mm pan circulation space
3. A minimum 850 mm clear opening width at doors (including active leaf) with circulation space provided at both sides of door that considers angles of approach and does not impede on the use of elements within the facility, for example, the basin.

- 30 to 40 mm diameter grab rails installed at a height of 800 to 810 mm with and appropriate length, distance from adjoining surfaces and angle of installation
- 770 to 800 mm maximum height hand basin top edge with appropriate leg clearance underneath
- Toilet paper holder a maximum 300 mm forward of pan and 700 mm high
- 790 to 810 mm front of pan to rear wall
- A minimum 1900 x 2300 mm to a height of 2000 mm pan circulation space.
- 450 to 460 mm centreline of pan from adjacent wall.
- 460 to 480 mm top of seat above floor.
- 790 to 810 mm front of pan to rear wall.
- A maximum 300 mm forward of pan and 700 mm high toilet paper holder.
- 1100 mm maximum height flushing control.
- 900 to 1100 mm maximum height soap dispenser and hand dryer.
- 800 to 840 mm maximum height basin (semi-recessed), 800 to 830 mm maximum height basin (wall mounted).
- 900 to 1850 mm maximum height mirror.
- 1250 to 1350 mm maximum height clothes hanging device.
- 30 - 40 mm diameter grab rails installed at a height of 800 to 810 mm with an appropriate length, distance from adjoining surfaces and angle of installations.
- A backrest in accordance with Australian Standards.

Ambulant Toilet

Figure 16: Side view of an ambulant toilet



1. 30 to 40 mm diameter grab rails installed at a height of 800 to 810 mm with an appropriate length, distance from adjoining surfaces and angles of installations.
2. Height of top of seat 460 to 480 mm above floor level.
3. Minimum 900 mm space at front of pan.

- Doors that have a minimum clear opening of 700 mm.
- Cubicle no less than 900 to 920 mm wide.
- 610 to 660 mm front of pan to rear wall.

- 460 to 480 mm top of seat above floor.
- 30 to 40 mm diameter grab rails installed at a height of 800 to 810 mm with an appropriate length, distance from adjoining surfaces and angle of installations.
- A coat hook installed at a height of 1350 to 1500 mm above floor level.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities Requirements - Buildings and Facilities
- AS 1428.3 – 1992 Obsolete June 2012 Design for access and mobility - Requirements for Children and Adolescents with Physical Disabilities
- AS/NZS 4586 - 2004 Slip Resistance Classification of New Pedestrian Surface Materials
- AS 1158 - 2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Access awareness handbooks](#)
- [Australian Standards](#)
- [The Good The Bad and The Ugly](#) (note that changes due to the introduction of the Disability (Access to Premises - Buildings) Standards 2010 will not be reflected in this resource).

Baby change areas

The following key requirements and access dimensions for baby change areas must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

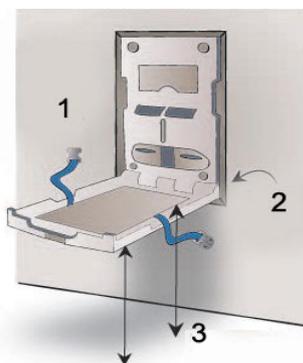
Key requirements

- Unisex accessible baby change area incorporating, or with direct access via a connecting doorway, to accessible and ambulant toilets.
- A continuous accessible path of travel from the property entrance and any onsite car park to and around the baby change table.
- Clear, easy to read signage and operating instructions that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Firm, level, slip resistant floor surface, in both wet and dry conditions under the baby change table.

- Baby change table installed at a height suitable for use by a person when standing or seated and incorporating adequate leg clearance underneath.
- If installed in a designated unisex accessible toilet, baby change table located so that it does not encroach into the minimum required circulation space of the toilet. (Placement near entry point will ensure it is closed prior to vacating).
- Adequate circulation space for a person using a pram, stroller or wheelchair to move around easily and access all fixtures fittings within the space, for example, baby change table, wash basin and nappy bin.
- Space to approach the baby change table from both the front and side.
- Effective contrasts between the baby change table, other fittings and background and adjacent surfaces.
- Controls that can be reached by a person when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements.
- Hand basin with lever or sensor operated taps, within reach of the change table.
- Nappy disposal unit provided in an accessible location.
- Accessible toilets and hand basins within the area (if space allows), that provide access for children and adults and consider users who are either left or right handed.
- Consistent and even lighting (reflected downward - without pooling or providing glare).

Key access dimensions

Figure 17: Baby change area



1. If installed in a designated unisex accessible toilet, baby change table located so that it does not encroach into the minimum required circulation space of the toilet
2. Self closing baby change table
3. Maximum 820 mm high baby change table and a minimum of 720 mm leg clearance underneath

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Maximum 820 mm high baby change table and a minimum of 720 mm leg clearance underneath.
- Self-closing baby change table.

- Accessible showers, toilets, fixtures and fittings to Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Buildings
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010

Links to other relevant information

- [Access awareness handbooks](#)
- [Australian Standards](#)
- [The Good The Bad and The Ugly](#)

Family change areas

The following key requirements and access dimensions for family change areas must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

Key requirements

- Unisex accessible family change area incorporating, or with direct access via a connecting doorway, to accessible and ambulant toilets.
- A continuous accessible path of travel from the property entrance and any onsite car park to and within the family change area.
- Adequate circulation space for a person using a pram, stroller or wheelchair to move around easily and access all fixtures fittings within the space, for example, baby change table, wash basin and nappy bin.
- Baby change table installed at a height suitable for use by a person when standing or seated and incorporating adequate leg clearance underneath. (Placement near entry point will ensure it is closed prior to vacating)
- Clear, easy to read signage and operating instructions, incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Controls that can be reached by a person when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements.

- Easy to access and use sanitary disposal unit provided in an accessible location.
- Effective contrasts between fixtures, fittings and background and adjacent surfaces.
- Firm, level, slip resistant floor surface, in both wet and dry conditions.
- Grab rails on walls in change area and in any shower or toilet areas.
- Hair and hand dryers in an accessible location.
- Lockers or storage units located nearby or within the area if space permits.
- Nappy disposal unit provided in an accessible location.
- Seating with backs and armrests.
- Space to approach any change table from both the front and side.
- Tear off paper towel for use on change table.
- Hand basin with lever or sensor operated taps, within reach of the change table.
- Accessible toilets, hand basins and showers that provide access for children and adults and which consider users who are left and right handed.
- Seating with backs and armrests suitable for both adults and children.
- Consistent and even lighting (reflected downward - without pooling or providing glare) at the entrance door and within the area.

Key access dimensions

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach.
- Minimum space of 2100 mm ceiling height (2400 mm preferred).
- Appropriate reach ranges and controls in accordance with Australian Standards
- Maximum 820 mm high baby change table and a minimum of 720 mm leg clearance underneath.
- Self-closing baby change table.
- Accessible showers, toilets, fixtures and fittings to Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities

- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010

Links to other relevant information

- [Access awareness handbooks](#)
- [Australian Standards](#)
- [The Good The Bad and The Ugly](#)

Adult assisted change areas

The following key requirements and access dimensions for adult assisted change areas must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

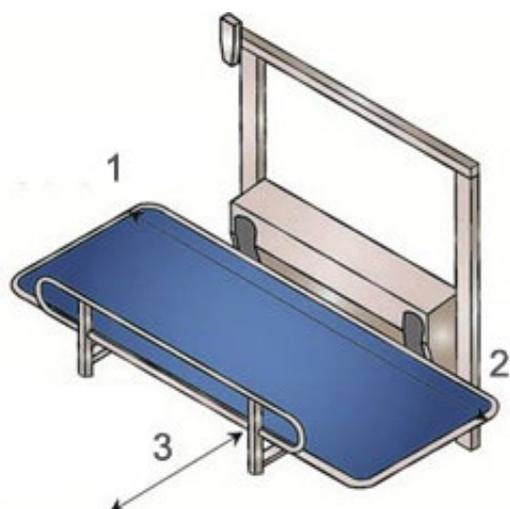
Key requirements

- Unisex adult assisted change area to accommodate people with a carer of the opposite gender and incorporating, or with direct access via a connecting
- doorway, to accessible and ambulant toilets.
- A continuous accessible path of travel from the property entrance and any onsite car park, to and within the change area.
- Clear, easy to read signage and operating instructions, incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Firm, level, slip resistant floor surface, in both wet and dry conditions.
- Adjustable height adult change table suitable for use by a person when standing or seated and incorporating adequate leg clearance underneath.
- Adequate circulation space for a person using a pram, stroller or wheelchair to move around easily and access all fixtures fittings within the space, for example, change table, wash basin and rubbish bin.
- Space to approach any change table from both the front and side.
- Effective contrasts between fixtures, fittings and background and adjacent surfaces.
- Controls that can be reached by a person when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements.
- Hand basin with lever or sensor operated taps, within reach of the change table.
- Easy to access and use sanitary disposal unit provided in an accessible location.
- Hair and hand dryers in an accessible location.
- A tracking hoist that provides entire room coverage and can be stored appropriately when not used.
- Grab rails on walls in the change area and in any shower or toilet areas.

- Lockers or storage units located nearby or within the area if space permits.
- Seating with backs and armrests.
- Tear off paper towel for use on change table.
- Accessible toilet hand basins and showers within the change area, that provide access for children and adults and support people who are either left or right handed.
- Consistent and even lighting (reflected downward - without pooling or providing glare) at the entrance door and within the area.

Key access dimensions

Figure 18: Adult assisted change area



1. Minimum space of 3500 mm x 2000 mm with a 2400 mm ceiling height (or equivalent 7m²)
2. A height adjustable adult change table a minimum of 1800 mm in length
3. A clear space in front of the toilet (1500 mm diameter) that allows a person to turn their wheelchair, without interference of the toilet pan and adult change table

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Minimum 850 mm clear opening width at doorways and circulation space on both sides of doors that considers angles of approach.
- Minimum space of 3500 mm x 2000 mm with a 2400 mm ceiling height (or equivalent 7m²) (3000 mm x 3400 mm preferred).
- A height adjustable adult change table a minimum of 1800 mm in length.
- Accessible showers, toilets, fixtures and fittings in accordance with Australian Standards.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work

- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Access awareness handbooks](#)
- [Australian Standards](#)
- [The Good The Bad and The Ugly](#) (note that changes due to the introduction of the Disability (Access to Premises - Buildings) Standards 2010 will not be reflected in this resource).

Showers

The following key requirements and access dimensions for showers must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

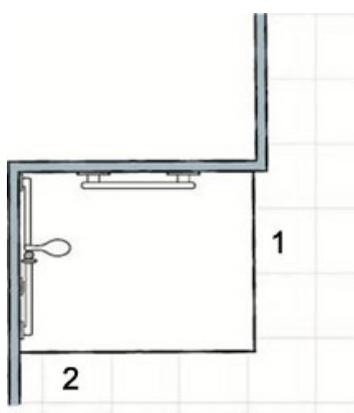
Key requirements

- A continuous accessible path of travel from the property entrance and any onsite car park to and into the shower area.
- Clear, easy to read signage at the entry to any showers incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Wide doorways which are not heavy or hard to open and provide appropriate circulation space.
- Doors that can be easily opened from the outside in an emergency.
- Shower area that is large enough for use by a person and a carer to assist when necessary.
- Floor surfaces that are slip resistant in wet and dry conditions.
- Showers that provide appropriate space for a person when standing or seated.
- Space available for people to transfer into or from mobility aids or aquatic wheelchair.
- Level shower floor and circulation space, for example, self draining with no step down, hob or kerb.
- Horizontal and vertical grab rails installed on walls.
- A vertical showerhead support and moveable showerhead that has an appropriate length flexible hose.
- A shower seat that is self-draining and has drop down legs to provide extra stability.
- Appropriately located and graded drain.

- Lever or sensor operated taps.
- A soap holder within reach when seated in shower.
- Access to a shelf for placement of personal items.
- Clothes hanging devices that can be accessed from a standing or seated position.
- Provision of mats for placement over benches seats to prevent injury or for people with sensitive skin, for example, small children and babies.
- Lockers / storage units located nearby.
- Controls on fixtures, fittings, showers that can be reached by a person when seated on the toilet and that are easy to see and use with a closed fist or open palm, for example, taps and seats
- Effective contrasts between doorway, fixtures and fittings, adjacent and background surfaces.
- Clean, maintained shower space.
- Consistent and even lighting (reflected downward - without pooling or providing glare) at and within the shower area.

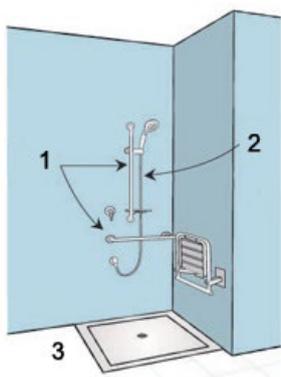
Key access dimensions

Figure 19: Overhead view of shower



1. Circulation space (a minimum 1600 x 2350 mm (2-walled enclosure) and 1600 x 2500 mm (3-wall enclosure))
2. Grade of between 1:60 to 1:80 in shower recesses and between 1:80 to 1:100 in the adjoining circulation space

Figure 20: Side view of shower



1. Horizontal and vertical grab rails installed on walls
2. A flexible hose a minimum of 1500 mm long shall be provided on any hand held shower head
3. Grade of between 1:60 – 1:80 in shower recess and between 1:80 – 1:100 in the adjoining circulation space

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach.
- Circulation space a minimum 1600 x 2350 mm (2-walled enclosure) and 1600 x 2500 mm (3-wall enclosure) with appropriate wet areas and fittings installed at appropriate heights – note spaces may overlap with toilet circulation space as appropriate.
- Grade of between 1:60 to 1:80 in shower recesses and between 1:80 to 1:100 in the adjoining circulation space.
- Horizontal grab rail installed at a height of 800 to 810 mm in accordance with Australian Standards.
- Showerhead vertical grabrail heights in accordance with Australian Standards.
- A flexible hose a minimum of 1500 mm on any hand held shower head.
- Wall outlet plus backflow prevention device 695 to 705 mm from finished floor.
- A shower seat that has rounded corners, legs that fold up when not in use and a minimum length of 960 mm, depth 390 to 400 mm and height of 470 to 480 mm.
- Soap dispenser at maximum height of 900 to 1100 mm.
- Clothes hanging devices with reach of the seat, that is, 400 ± 10 mm and 600 mm ± 10 mm from seat at 1200 to 1350 mm maximum height.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Access awareness handbooks](#)

- [Australian Standards](#)
- [The Good The Bad and The Ugly](#) (note that changes due to the introduction of the Disability (Access to Premises - Buildings) Standards 2010 will not be reflected in this resource).

3.6 Signage and wayfinding

Key requirements

Consideration should be given to the 4 main criteria in wayfinding design as follows:

- architectural cues
- graphic communication
- audible communication
- tactile communication.

Consideration should also be given to provision of the 4 main categories of graphic wayfinding elements including:

- identification
- reinforcement
- orientation
- destination.

General access requirements for all signage

Work within a hierarchy of signage to maximise impact and usability as follows:

- identification - property, building number, name visible from the roadside, distance of travel
- information - opening hours, facilities available, for example, toilets, picnic areas; located directly inside site or building entrance
- direction - text and arrows directing users to facilities, for example, at directional decision points, car parking, set down and waiting areas
- emergency and safety signs - at various locations including emergency exits.
- Appropriate print size on all signs suitable for expected viewing distances.
- A range of alternatives to printed signage only, for example, audio, raised tactile and Braille.

General access requirements for static signage

- Appropriately located at entry to and along continuous accessible paths of travel.
- Clearly visible to people when standing or seated.
- Consistent graphic style and layout throughout a site or building.
- Appropriate use of international symbols of access or deafness.
- Concise and unambiguous content.
- Use of common terms, names, colours rather than obscure, technical names, for example, orange, blue, brown rather than ochre, turquoise or beige.

- Use of appropriate inclusive language, 'accessible' entry or ramp in preference to 'disabled' entry or ramp.
- Factual and specific information about degrees of difficulty of pathways in outdoor spaces such as parks, suitable for tourist, experienced hiker, assisted wheelchair user and independent wheelchair user.
- Capital and lower case letters (Title Case).
- Use of Sans Serif font, Arial or Helvetica.
- Effective contrast between sign and sign background and adjacent surfaces.
- Raised tactile and Braille elements on facility identification and direction signs, toilets.
- Back-lit without glare.
- Low reflectivity (avoid glass and acrylic materials).
- Consistent and even lighting (reflected downward - without pooling or providing glare) over key elements within the space.
- Well maintained and free from any overhanging obstructions and graffiti.

General access requirements for screen and scrolling signage

- Minimum 6 second static to allow for reading of sign.
- Audio alternatives to screen or scrolling signs.

General access requirements for maps

- Maps of any site or building at the entrance and at key directional points.
- Maps that read in the direction that the user is facing, including information to assist users with their current location, 'you are here' and identifying fixtures or landmarks to assist with wayfinding for example, water fountain, sculpture and arbour.
- Continuity of language in informational maps and signage, that is, information map states 'pavilion', sign at building states 'pavilion'.

General access requirements for tactile signs and maps

- Tactile signs and maps at key points within a building or site.
- Tactile signs or maps at the main entry to a venue.
- Tactile information that includes general orientation cues, access and egress points, changes in direction and key facilities.

General access requirements for display and exhibition signage

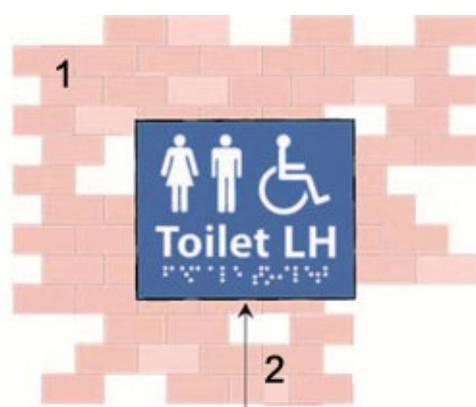
- Descriptive labelling on exhibits in Sans Serif font type and appropriate size.
- Appropriate lighting.
- Appropriate contrast to background and adjacent surfaces.
- Use of non-reflective signage materials.
- Audio programs as alternatives to signage on displays or exhibits.

General access requirements for tactile ground surface indicators

- Hazard tactile ground surface indicators used to assist with wayfinding installed at the top and bottom of steps, stairs and ramps, along jetties, raised platforms etc and other areas where there is an overhead obstruction encroaching on to a pathway, underneath a stair croft, and at changes in direction on pathways.
- Directional tactile ground surface indicators used to assist with wayfinding by providing direction to installations such as at road crossing points, seating and public transport stops.
- Appropriate luminance contrast between tactile ground surface indicators and background and adjacent surfaces.

Key access dimensions

Figure 21: Door entrance



1. International Symbol of Access – white wheelchair on ultramarine blue background
2. Braille and tactile signage installed latch side of door 1200 to 1600 mm above floor level.

- Letters 17.5 mm high for each metre of viewing distance.
- Minimum 30% luminance contrast between sign and sign background - white on black, yellow on black and white on ultramarine blue to Australian Standards is recommended.
- If signage can be obscured, installation of duplicate signage located above 2000 mm.
- Sans serif type font, Arial or Helvetica.
- Signage located within the common 'Zones for Viewing' in accordance with Australian Standards.
- Tactile and Braille signage installed to identify an accessible entry of a building at any non-accessible entry, an accessible toilet and the type of toilet provided, left hand use or right hand use, an ambulant toilet, hearing augmentation type and space covered and the location of receivers if in use, and lifts.
- Tactile ground surface indicators set back 300 mm \pm 10 mm from any hazard (600 to 800 mm deep), extending across width of a path adjoining the hazard, and have a minimum of 30% luminance contrast to the surrounding ground surface and background. (Dimensions for tactile ground surface indicators, both hazard and directional, at specific locations and required luminance contrasts in accordance with Australian Standards).

- Raised tactile and Braille signs mounted at a height of 1200 to 1600 mm above the ground or floor surface.
- Appropriate international symbol of access as required.

Relevant Australian Standards for fire extinguishers and alarms

- AS/NZS 2890.6 - 2009 Parking facilities - Off-street Parking for People with Disabilities
- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 1428.3 – 1992 Obsolescent June 2012 Design for access and mobility - Requirements for Children and Adolescents with Physical Disabilities
- AS/NZS 1428.4:1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 1428.5 Design for access and mobility - Communication for People who are Deaf or Hearing Impaired
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- AS 1735 Lifts, Escalators and Moving Walks
- AS 1670.4 - 2004 Fire detection system design, installation and commissioning - Sound Systems and Intercom Systems for Emergency Purposes
- AS 2293.1 - 2005 Emergency escape lighting and exit signs for buildings - System Design, Installation and Operation
- AS 4428.4 - 2004 Fire detection, warning, control and intercom systems - Control and Indicating Equipment - Intercommunication Systems for Emergency Purposes
- AS 1744:1975 Standard alphabets for road signs - metric units
- AS 2700 -2011 Colour standards for general purposes
- AS 1742 Set:2010 Street name and community facility name signs
- AS 2156.1 - 2001 Walking Tracks - Classification and signage
- ISO 7001:2007 Graphical symbols - Public information symbols
- Disability (Access to Premises - Buildings) Standards 2010

Links to other relevant information

- [All installations](#)
- [Access awareness handbooks](#)
- [Building Sight](#)
- [Wayfinding Design Guidelines and Wayfinding System Audit](#)

- [Australian Hearing](#)
- [Vision Australia](#)
- [The Good The Bad and The Ugly](#)

3.7 Beaches, lakes and rivers

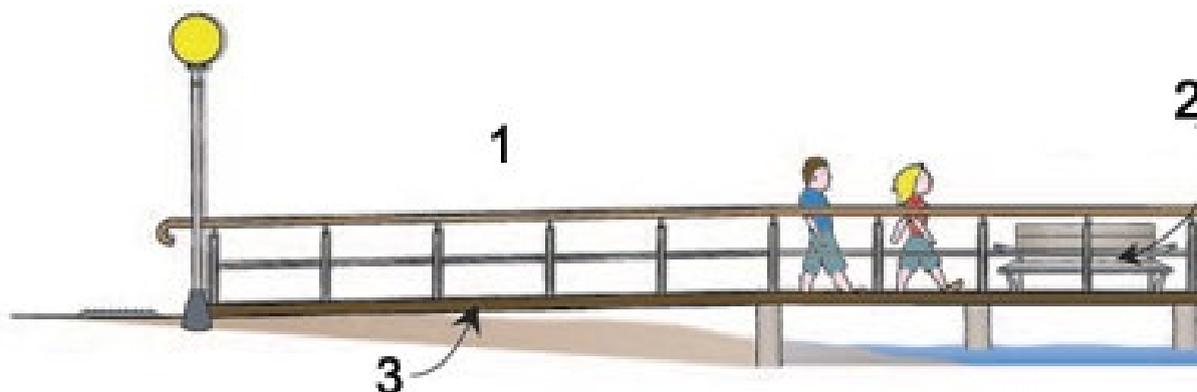
The following key requirements and access dimensions for beaches, lakes and rivers must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

Key requirements

- A continuous accessible path of travel from the property entrance and any associated car park to any beach, lake or river access point.
- Clear, easy to read general signage incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Clear, easy to read safety signage, incorporating relevant international symbols of access or deafness that can easily be read by a person when standing or seated or within any water regarding water depth, safe areas to swim or other safety issues.
- Information regarding any equipment hire and cost and hire terms, for example, beach accessible wheelchair, umbrellas, boat or ski hire and chairs.
- A boardwalk with handrails, guard rails and kerbs on both sides, that provides an accessible path of travel to and over any soft ground surface, for example, section of beach (sand), with access to the water or an accessible ramp, matting or other accessible pathway that provides access into the water.
- Resting spaces, including some incorporating seating with backs and arm rests, protected by shade and shelter, connected to, but set back from the path of travel
- Level access to viewing areas or platforms.
- Shade and shelter over some viewing or rest areas, or platforms.
- Accessible shower and 'feet' rinse installations or toilets connected to but set back from the path of travel.
- Access to appropriate toilets and change rooms suitable for all users including people with mobility challenges, for example, ambulant and unisex accessible toilets and family change rooms.

Key access dimensions

Figure 22: Access to a boardwalk



1. Boardwalk planks at right angle to path of travel

2. Seating installed at a minimum 60 m intervals along pathways

3. Minimum 450 mm high kerbs on edge of any raised boardwalk

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high and 1000 mm wide for an ambulant person, 1200 mm wide for a person using a wheelchair, 1500 mm wide for 2 people to pass each other easily and 1800 mm wide for a person using a wheelchair to turn 180 degrees.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Boardwalk surface planks installed at a right angle to the path of travel.
- A minimum of 6 mm and maximum of 10 mm between boardwalk surface planks.
- Minimum of 450 mm high kerbs on edge of any boardwalk (raised above ground level).
- Seating installed at a minimum 60 m intervals along pathways.
- Seating with backs and armrests (220 to 300 mm above the seat) at a height of 350 mm - suitable for children, 450 mm - general public use, 520 mm - for older adults).
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Accessible showers, toilets, fixtures and fittings in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for all buildings

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work

- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces

Links to other relevant information

- [All installations](#)
- [Baby change areas](#) and [Family change areas](#)
- [Showers](#)
- [Toilets - Accessible, ambulant and portable](#)
- [Access awareness handbooks](#)
- [Australian Standards](#)
- [Camping Association of Australia](#)

Jetties

The following key requirements and access dimensions for jetties must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

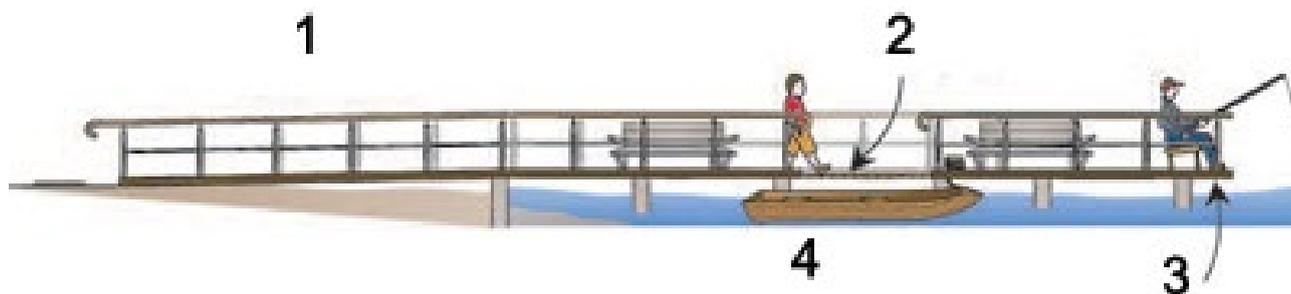
Key requirements

- A continuous accessible path of travel from the property entrance and any associated car park to the jetty.
- Clear, easy to read signage incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Kerbs, guard rails on any ramps to a jetty.
- Appropriate gradients on any ramps to or at the jetty.
- An accessible non-slip pathway in both wet and dry conditions onto and along the jetty.
- An appropriate contrast edge along the jetty next to the water's edge.
- Kerbs on jetty edges or hazard tactile ground surface indicators along any jetty edge where there is no guard rail or kerb, for example, water edge (excluding where boat access is required).
- Jetty floor planks installed at a right angle to the path of travel.
- Handrails on both sides of the jetty that extend out to boat boarding areas (where provided).
- Shade and shelter over any section of jetty where users must wait to board water craft.
- Resting spaces, (if space allows on jetty), incorporating seating with backs and armrests, protected by shade and shelter, connected to, but set back from the path of travel along the jetty.
-

- An accessible height fishing area (if fishing allowed) with access over or any safety barrier that can easily be used by a person when standing or seated.

Key access dimensions

Figure 23: Access to a jetty



1. Preferred minimum width 2000 mm	2. Minimum 6 mm and maximum 10 mm between jetty planks	3. An extended platform 2400 mm x 1500 mm minimum, to be provided for fishing where a jetty is not 2000 mm wide	4. Access to boats given at low level jetties
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- A continuous accessible path of travel that is a minimum of 2000 mm high, 1000 mm wide for an ambulant person, 1200 mm wide for a person using a wheelchair, 1500 mm wide for 2 people to pass each other easily and 1800 mm wide for a person using a wheelchair to turn 180 degrees.
- Jetty for access to small boats to be fixed at a max of 600 mm above water level.
- Floating jetty or pier a maximum of 150 to 600 mm above water level.
- A jetty that is at least 2000 mm wide (2400 mm preferred – 1500 mm minimum)
- An extended platform 2400 mm x 1500 mm minimum, to be provided for fishing where a jetty is not 2000 mm wide.
- A kerb or kick plate and rail maximum height 350 mm to provide protection but allow for fishing.
- A minimum of 6 mm and maximum of 10 mm between jetty planks.
- A minimum 300 mm kerbs on edge of jetty where provided.
- Tactile ground surface indicators set back 600 to 900 mm from any hazard (600 – 900 mm deep) and have a minimum of 30% luminance contrast to their adjoining or background surfaces.
- Seating with backs and armrests (220 to 300 mm above the seat) at a height of 350 mm suitable for children, 450 mm - general public use, 520 mm - for older adults).
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 1428.4.1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces

Links to other relevant information

- [All installations](#)
- [Beaches, lakes and rivers](#)
- [Access awareness handbooks](#)
- [Australian Standards](#)
- [Camping Association of Australia](#)

3.8 Car parking and associated infrastructure

Car parking

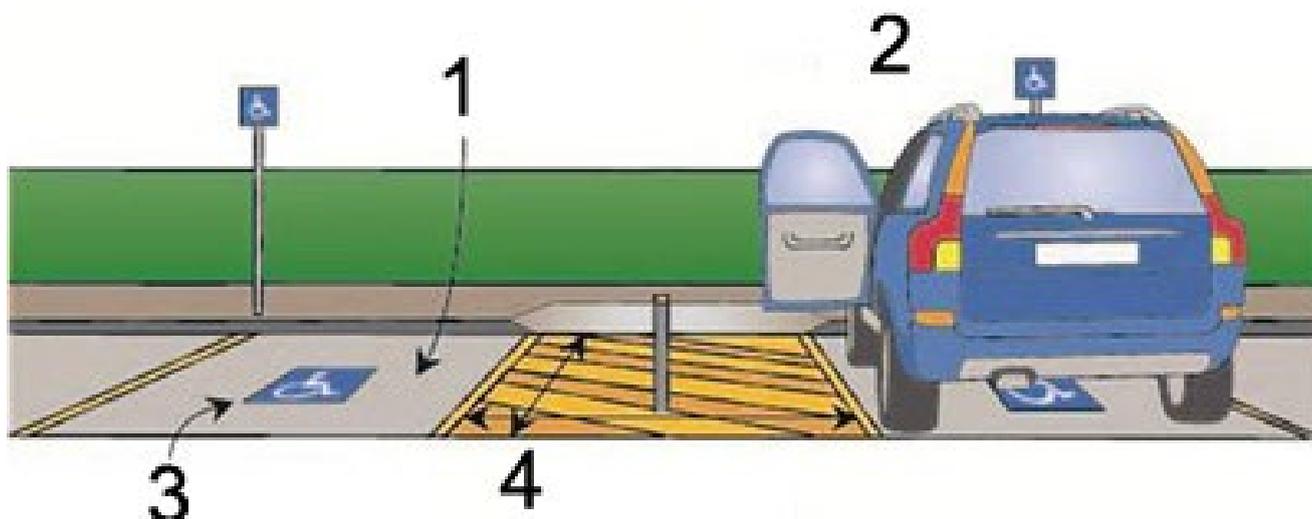
Key requirements

- A continuous accessible path of travel to, into and within the parking area and to and around any parking payment machines.
- A continuous accessible path of travel from the parking bays to any onsite building, facility or installation.
- Appropriate signage at the site entry directing users to parking areas including location and number of designated accessible parking bays, parking for larger and longer vehicles, rear and side loading vehicles and maintenance vehicles.
- Designated accessible parking bays, as close as possible to the principal pedestrian entry of the site or building.
- Easily visible signage at the parking bay incorporating vertical signage, and appropriate ground surface markings, for example, international symbol of access and parents with prams.
- Adequate overhead clearance at any parking bays and roadways leading to these areas to cater for users with vehicle roof mounted storage containers.
- Firm, level, slip resistant ground surface in wet and dry conditions at parking bays.
- In large car parks, separate vehicle entry and exit points to assist with the flow of traffic and speed humps strategically located to increase safety.

- Parking payment machines that are easy to access and that can be reached by a person when standing or seated.
- Controls on parking payment machines that can be used with a closed fist or open palm and incorporating raised tactile and Braille elements.
- Easy to use alternatives to any coin feed points on parking payment machines.
- Clear, easy to read signage and operating instructions on any parking payment machines incorporating relevant international symbols of access or deafness that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Shade and shelter over some parking bays, including designated accessible parking bays.
- Consistent and even lighting at parking bays, parking payment ticket machines and connecting pathways.

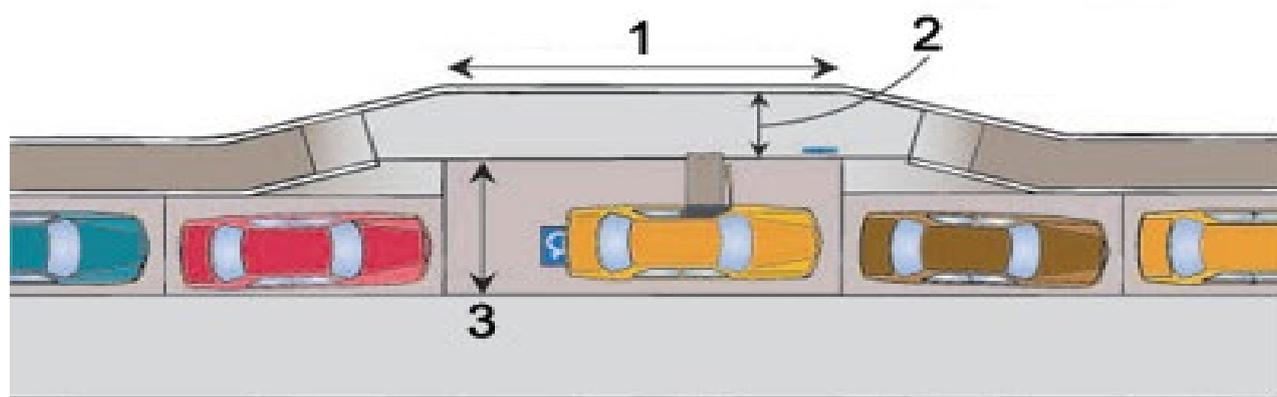
Key access dimensions

Figure 24: 90 degree angled car parking bays



- | | | | |
|---|--|--|--|
| <p>1. Dedicated angled space 2400 mm wide and 5400 mm long</p> | <p>2. Overhead clearance on roadways (minimum of 2200 mm) and at any designated accessible parking bay (minimum of 2500 mm) to allow for use by a vehicle fitted with roof mounted storage device</p> | <p>3. International Symbol of Access 800 to 1000 mm high within a blue rectangle with no side greater than 1200 mm, located in the centre of the space 500 to 600 mm from its entry</p> | <p>4. Shared pathway (at grade) 2400 mm wide and 5400 mm long</p> |
|---|--|--|--|

Figure 25: Parallel parking bays



- | | | |
|---|---|--|
| <p>1. Minimum length of parking bay and adjoining path of travel 7800 mm</p> | <p>2. Minimum width of adjoining pathway 1600 mm</p> | <p>3. Minimum width of parallel bay 3200 mm</p> |
|---|---|--|

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide to car parking and parking payment machines.
- Overhead clearance on roadways (minimum 2200 mm) and at any designated accessible parking bay (minimum 2500 mm) to allow for use by a vehicle fitted with roof mounted storage device.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Appropriate number of parking bays, including designated accessible parking bays, in accordance with the range in relevant Australian Standards.
- Dedicated space a minimum 3200 mm wide and 7800 mm long at any designated accessible parallel parking bay with a shared area adjacent to the non-traffic side 1600 mm wide x 7800 mm long. Shared area may be located at a higher level with an appropriate kerb ramp provided for access.
- Dedicated space and shared area at one side, a minimum 2400 mm wide and 5400 mm long at any designated accessible angled parking bay, with a shared area 2400 mm long x 2400 mm wide at one end of the dedicated space (all at same grade).
- Identification of designated accessible parking bays through the use of the International Symbol of Access that is marked on the ground 800 to 1000 mm high
- within a blue rectangle with no side greater than 1200 mm, located in the centre of the space 500 to 600 mm from its entry.
- Delineation of designated accessible parking bays through the use of unbroken yellow lines 80 to 100 mm wide, (except where side has a kerb, barrier or wall) marked with a non-slip ground surface material. Markings to shared areas, where required, through the use of unbroken longitudinal lines.
- Controls on parking payment machines 500 to 1200 mm high and appropriate reach in accordance with Australian Standards.

- Minimum 30% luminance contrasts between parking payment machines, vertical signage, ground surface markings and background and adjacent surfaces.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS/NZS 2890.6 - 2009 Parking facilities - Off-street Parking for People with Disabilities
- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Buildings
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 1428.4.1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- Disability (Access to Premises - Buildings) Standards 2010

Links to other relevant information

- [Floor and ground surfaces](#)
- [Signage and wayfinding](#)
- [Lighting and contrasts](#)
- [Landscape design](#)
- [Australian Standards](#)

Set down and waiting areas

Key requirements

- A continuous accessible path of travel to, into and within the set down and waiting areas and to and around any installations.
- A continuous accessible path of travel from set down and waiting areas to any onsite building, facility or installation.
- Appropriate signage at the site entry directing users to set down and waiting areas including location of areas for larger and longer vehicles and rear and side loading vehicles, maintenance vehicles.
- Designated accessible set down and waiting area as close as possible to the principal pedestrian entry of the site or building.
- Set down or waiting areas located so that they do not impede vehicle or pedestrian traffic flow.

- Easily visible signage at the set down and waiting area incorporating vertical signage and appropriate ground surface markings (for example, international symbol of access and parents with prams).
- Adequate overhead clearance at any set down and waiting areas and roadways leading to these areas to cater for users with vehicle roof mounted storage containers.
- Firm, level, slip resistant ground surface in wet and dry conditions at set down and waiting areas.
- Colour coding and numbering or lettering designating specific set down and waiting zones within large parking areas.
- In large set down or waiting areas, separate vehicle entry and exit points to assist with the flow of traffic, and speed humps strategically located to increase safety.
- Seating with backs and armrests that is located near the entry to the building or site or near transparent walls on any enclosed waiting area that gives clear lines of sight to any taxi zone, set down and waiting area.
- Shade and shelter over some waiting areas.
- Consistent and even lighting at parking bays, parking payment ticket machines and connecting pathways.

Key access dimensions

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide to any set down or waiting areas and associated installations, for example, payment machines.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Overhead clearance on roadways (minimum 2200 mm) and at any designated accessible vehicle waiting bay (minimum 2500 mm) to allow for use by a vehicle fitted with roof mounted storage device.
- Appropriate number of vehicle waiting bays required for the expected volume of use.
- Dedicated space a minimum 3200 mm wide and 7800 mm long at any designated accessible parallel vehicle waiting bay with a shared area adjacent to the non-traffic side 1600 mm wide x 7800 mm long. Shared area may be located at a higher level with an appropriate kerb ramp provided for access.
- Dedicated space and shared area at one side, a minimum 2400 mm wide and 5400 mm long at any designated accessible angled parking bay, with a shared area 2400 mm long x 2400 mm wide at one end of the dedicated space (all at same grade).
- Identification of designated accessible vehicle waiting bays through the use of the international symbol of access that is marked on the ground 800 to 1000 mm high within a blue rectangle with no side greater than 1200 mm, located in the centre of the space 500 to 600 mm from its entry.

- Delineation of designated accessible waiting bays through the use of unbroken yellow lines 80 to 100 mm wide (except where side has a kerb, barrier or wall) marked with a non-slip ground surface material. Markings to shared areas, where required, through the use of unbroken longitudinal lines.
- Appropriate reach ranges and controls in accordance with Australian Standards
- Minimum 30% luminance contrasts between vertical signage, ground surface markings and background and adjacent surfaces.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS/NZS 2890.6 - 2009 Parking facilities - Off-street Parking for People with Disabilities
- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 1428.4.1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Floor and ground surfaces](#)
- [Signage and wayfinding](#)
- [Lighting and contrasts](#)
- [Landscape design](#)
- [Australian Standards.](#)

Vehicle guard rails and wheel stops

Key requirements

- A continuous accessible path of travel for pedestrians, (including users of mobility aids) around vehicle guard rails and wheel stops.
- Effective contrasts between vertical and horizontal installations and surfaces.
- Firm, level, slip resistant ground surfaces in both wet and dry conditions.
- Appropriate level circulation space around vehicle guard rails and wheel stops.
- Vehicle guard rails or wheel stops installed to remove overhang of vehicles across pathways.

Key access dimensions

- A continuous accessible path of travel (that is a minimum 1000 mm wide and 2000 mm high) to any vehicle guard rail or wheel stop with a minimum of 900 mm maintained between vehicle guard rails or wheel stops located next to each other.
- Minimum 30% luminance contrast between vehicle guard rails and wheel stops and background and adjacent surfaces.
- Maximum height of 600 mm at vehicle guard rails and 150 mm at wheel stops.
- Level circulation space around vehicle guard rails and wheel stops a minimum 800 mm x 1350 mm at front.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 1428.4.1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- Disability (Access to Premises - Buildings) Standards 2010

Links to other relevant information

- [Floor and ground surfaces](#)
- [Lighting and contrasts](#)
- [Landscape design](#)
- [Australian Standards](#)

Boom gates and entry control points

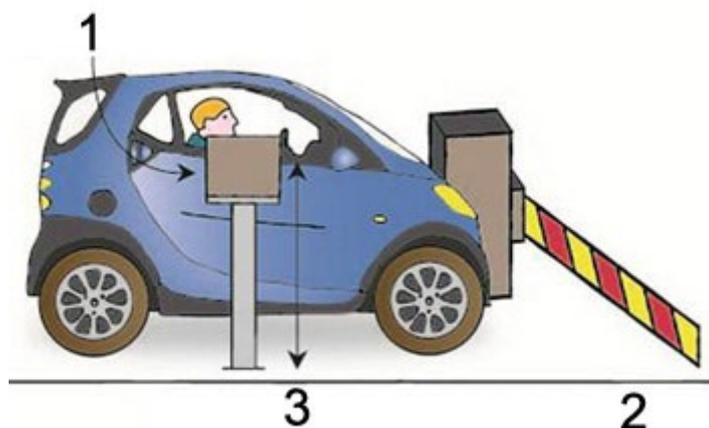
Key requirements

- A continuous accessible path of travel from the property entrance and any onsite car park to and around any boom gate or entry control point.
- Boom gate or entry control point located on a firm, level, slip resistant ground surface, in both wet and dry conditions.
- Space to approach the boom gate or entry control point from both the front and side.
- Adequate space through any security control for ease of movement by people using mobility aids or assistance animals.
Space next to the boom gate or entry control point for a person using a mobility aid to stop without obstructing an adjoining pathway.

- Clear, easy to read signage and operating instructions, incorporating relevant international symbols of access or deafness that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Effective contrasts between the boom gate or entry control point and background and adjacent surfaces.
- Controls that can be reached by a person when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements.
- Easy to use alternatives to any coin feed points.
- Alternatives to queuing areas at entry control points that require people to stand for long periods.
- Adequate circulation space through queuing areas at entry control points for people with mobility aids, for example, prams and wheelchairs.
- Shelter and shade over the area if users are required to wait for any length of time.
- Consistent and even lighting (reflected downward - without pooling or providing glare).
- Ticket dispensing machines which have no sharp edges and issue a ticket large enough to grasp with ease.

Key access dimensions

Figure 26: Boom gate and entry control point



1. Tactile elements on buttons – (number '5' as a minimum) if numbers are provided
2. Alternative accessible path of travel through vehicle area
3. Controls that are pushed at height of 900 to 1200 mm above floor level

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide, to and through boom gates and entry control points for pedestrians.
- Signage and operating instructions installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at entrances with circulation space on both sides of the entrance which considers angles of approach and incorporates level landings (including the operative leaf of a multiple leaf door).
- Minimum 30% luminance contrast between boom gate, entry control points, controls and background and adjacent surfaces.

- Switches and controls that are a minimum of 30 mm x 30 mm and proud of the surrounding surface.
- Appropriate reach ranges to any entry control and payment machines in accordance with Australian Standards.
- Controls on boom gates which are pushed 900 to 1200 mm high.
- Tactile elements on buttons - number 5 as a minimum, if numbers are provided.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Floor and ground surfaces](#)
- [Lighting and contrasts](#)
- [Shade and shelter](#)
- [Signage and wayfinding](#)
- [Australian Standards.](#)

Fences, gates and bollards

Key requirements

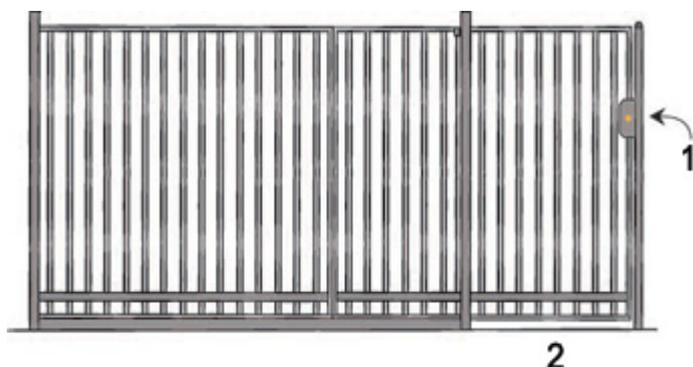
- A continuous accessible path of travel from the property gate and any onsite car park to principal entry gates.
- Clear, easy to read signage at gates, incorporating relevant international symbols of access or deafness that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- A range of accessible gates through fences (where appropriate).
- Gates that are visible from any vehicle access routes, set down areas and car parks with appropriate signage that directs users to their desired destination.
- Path surfaces at gates with a contrast colour, texture or material to assist with identification of the gate.

- Level transition or an appropriate threshold or step ramp at gates.
- Wide gateways (self-opening preferred), that are not heavy or hard to open and provide appropriate circulation space at gates.
- Large, easy to use and reach locks and snibs.
- An alternative means of access if a childproof or safety gate is in use, for example, buzzer, swipe card and master locksmiths key system.
- Remote controls to operate gates where controls may be difficult to reach.
- Effective motion and presence sensors at any automatic opening gates.
- D or D type lever style gate handles in contrast to background and adjacent surfaces on all gates where handles are required.
- Easy to adjust gate closers.
- Gate controls that can be reached by a person when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements, for example, entry buzzer and afterhours access.
- Gate controls that are located on the path of travel to the gate, to allow adequate time when in operation for a person to move fully through the gate prior to the gate closing.
- Airlocks at any gates that allow ease of movement, particularly for people using mobility aids or assistance animals.
- Alternatives to swing gates where circulation space may be limited, for example, sliding gates.
- Glazing panels in gates to assist users to view pedestrian traffic from either side.
- Appropriate safety strip on any fully glazed gates or adjacent fully glazed wall capable of being mistaken as an entrance.
- Metal kick plate at the bottom of gates to protect against damage by prams, strollers and wheelchairs.
- Use of screens or baffles at openings in fences (where appropriate, for example, toilets) that eliminates the need for gates.
- Effective contrasts between gateways, controls, walls, leading edge of gates and adjacent and background surfaces.
- Clear, accessible space inside gates of a facility that allows users to adjust to changed lighting conditions within the facility interior.
- Glare free floor surfaces (that may be perceived as being slippery), inside any facility gate.
- Seating with backs and armrests (that is located near the gate to a facility), that gives clear lines of sight to any taxi zone, set down or waiting area.
- Shade and shelter at gates to allow people to wait out of inclement weather if gates are not open.
- Shade and shelter at gates in contrast to background and surrounding surfaces to assist with identification of the gate.
- Alternatives to queuing areas at gates that require people to stand for long periods.

- Adequate circulation space through queuing areas at gates for people with mobility aids, for example, prams, wheelchairs.
- Transparent fencing materials that allow lines of sight to be maintained, for example, wire mesh (where appropriate).
- Use of construction materials that are free from projections and do not splinter or scratch.
- Bollards that are either square or have a large enough diameter to act as a seat (where required).
- Lighting at the gate that has a higher lux level than the surrounding lighting to assist with identification and safety.

Key access dimensions

Figure 27: Fence and gate with accessible control



1. An alternative means of access if a childproof or safety gate is in use, for example, buzzer, swipe card, master locksmiths, access key etc.
2. Level transition or an appropriate threshold or step ramp at gate

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at gateways) and 1000 mm wide to gates.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Any non-accessible building gate to be located not more than 50 m away from an accessible gate.
- A minimum 850 mm clear opening width at entry points in fences or gates and circulation space on both sides of the fence / gate, which considers angles of approach and incorporates level landings (including the operable leaf of a multiple leaf gate).
- Maximum rise of 35 mm, 280 mm length and gradient of 1:8 at any threshold ramp at a gateway.
- Step ramps to meet circulation spaces and angles of approach at gateways in accordance with the range in Australian Standards.
- Solid strip a minimum of 75 mm wide installed across the width of any gate, with the lower edge at a height of 900 to 1000 mm above floor level on any fully glazed gate.
- A maximum force of 20N at the gate handle to open gates and gate closers that are adjustable.

- Any gate entrance buzzer or intercom 900 to 1100 mm high.
- D or D type lever style gate handles on any gates requiring handles at 900 to 1100 mm high.
- Gate controls that only need to be touched at a height of between 900 to 1250 mm and not less than 500 mm from an internal corner.
- Gate controls that only need to be pushed, for example, panic bars on egress routes, located at a height of between 900 to 1200 mm.
- Gate controls and switches that need to be grasped or turned, at 900 to 1100 mm high.
- Gate controls that are manually operated for power operated gates, at a height of 900 to 1100 mm, no closer than 500 mm from an internal corner.
- Gate handles with 35 mm and not more than 45 mm clearance between the handle (in the centre) and the back plate or gate face.
- A pull bar or handrail at a height of between 900 to 1100 mm on any outward opening gate that is not self closing.
- Manual controls for power operated gates installed at a height of between 900 to 1100 mm, no closer than 500 mm from an internal corner and between 1000 to 2000 mm from any hinged gate leaf and a surface mounted sliding gate in the open position.
- Minimum 30 mm x 30 mm buttons or switches for gate controls, proud of surrounding surfaces.
- Snibs with a lever handle a minimum of 45 mm from the centre of the spindle.
- Sliding gate handles a minimum of 60 mm from the gate jamb or gate stop when closed / open.
- A minimum distance of 1450 mm between gateways within an airlock or vestibule, plus the gate leaf width if the gate opens into the space
- Lighting installed to required lux levels in accordance with Australian Standards.
- Minimum 30% luminance contrast between gates, gateway, controls and background and adjacent surfaces.
- Bollards that are a minimum of 600 mm high and if used as a seat either minimum 300 mm diameter or square.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- Disability (Access to Premises - Buildings) Standards 2010

Links to other relevant information

- [Floor and ground surfaces](#)
- [Lighting and contrasts](#)
- [Shade and shelter](#)
- [Signage and wayfinding](#)
- [Australian Standards](#)

Baffles and screens

Baffles can assist with blocking or reducing noise in the environment.

Screens can assist with blocking or reducing vision or views or in some instances act as safety barriers or way finding devices in the environment.

Key requirements

- A continuous accessible path of travel from the property entrance and onsite car park to and through any baffles and screens.
- Clear, easy to read signage, incorporating relevant international symbols of access or deafness, relating to elements behind baffles and screens, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements, for example, toilets.
- Effective contrasts between baffles and screens and background and adjacent surfaces.
- Consistent and even lighting (reflected downward - without pooling or providing glare).
- Handrails installed on screens that are secure and easy to grip.

Key access dimensions

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide to and at any entry points through baffles or screens.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at doorway openings in baffles and screens with circulation space provided at both sides that considers angles of approach.
- Handrails that have a circular diameter of 30 to 50 mm for a minimum of 270 degrees, are at a consistent height of between 865 to 1000 mm, with a minimum clearance of 50 mm from the baffle or screen.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 1680 - 2009 Interior Lighting - Safe Movement
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces.

Links to other relevant information

- [Floor and ground surfaces](#)
- [Lighting and contrasts](#)
- [Shade and shelter](#)
- [Signage and wayfinding](#)
- [Australian Standards.](#)

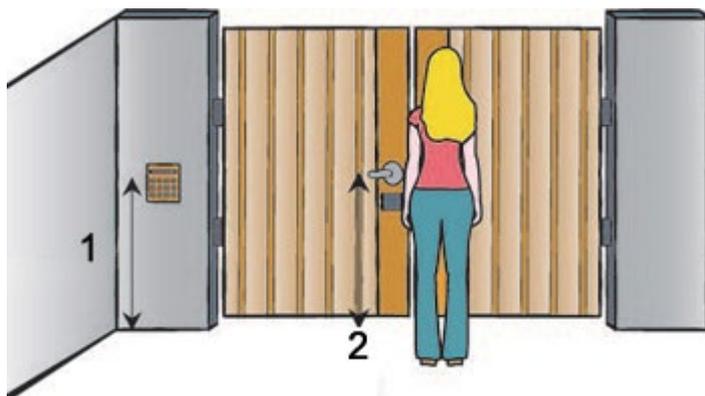
Keys, keypads and padlocks

Key requirements

- A continuous accessible path of travel to the area where the keypad or padlock is located.
- Clear, easy to read signage (where required), incorporating relevant international symbols of access or deafness that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Large colour coded keys that have an easy hold 'grip'.
- Use of a master key system in large buildings, limiting the need for multiple keys.
- Large snibs on any locks.
- Large buttons incorporating large print on any keypads.
- Keypads and padlocks that can be reached by a person when standing or seated.
- Easy to grasp, hold and open padlocks.
- Keypads, locks that have appropriate clearance from adjacent surfaces and clear, level circulation space around.
- Alternatives to keys, keypads or padlocks (where possible) with controls that can be used with a closed fist or open palm and incorporating raised tactile and Braille elements.
- Effective contrasts between doors, gates, key pads and letters and numbers and padlocks and background and adjacent surfaces.
- Consistent and even lighting (reflected downward - without pooling or providing glare) over key pads and padlocks.

Key access dimensions

Figure 28: Gate with keypad and accessible height controls



1. Keypads that are located above floor level at a height of between 900 to 1200 mm
2. Door controls, for example, handles, locks located at a height of 900 to 1100 mm above floor level.

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide to entrances and keypads and padlocks.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Padlocks which are located above floor level at a height of between 900 to 1100 mm.
- Keypads which are located above floor level at a height of between 900 to 1200 mm.
- Keypads setback a minimum of 500 mm from any corner.
- Snibs that have a lever handle a minimum of 45 mm from the centre of the spindle.
- Circulation spaces around padlocks and keypads that allow for varied angles of approach, for example, front and side.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Minimum 30% luminance contrasts between doors, walls, keypads, letters and numbers and padlocks and background and adjacent surfaces.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 1680 - 2009 Interior Lighting - Safe Movement
- AS 1158 - 2010 Lighting for Roads and Public Spaces
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials.

Links to other relevant information

- [Floor and ground surfaces](#)
- [Shade and shelter](#)
- [Signage and wayfinding](#)
- [Australian Standards.](#)

Bicycle storage and racks

The following key requirements and key access dimensions for bicycle storage and racks must be considered in addition to those for all installations.

Key requirements

- Some storage spaces that are large enough to accommodate longer or larger bicycles, for example, hand cycles, tandem bicycles and bicycle with baby trailer.
- Adequate access to any bicycle hire equipment, for example, helmet dispenser.
- Coin feed points that are easy to see and reach and alternatives to these where possible.
- If helmets are provided, sizes to suit both children and adults.
- Co-located with accessible drinking fountain and seating with backs and arm rests.

Key access dimensions

- Coin feed slots 800 to 900 mm high.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Seating with backs and armrests (220 to 300 mm above the seat) at a height of 350 mm - suitable for children, 450 mm - general public use, 520 mm - for older adults.
- Drinking fountain in accordance with Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities.

Links to other relevant information

- [All installations](#)
- [Drinking fountains](#)
- [Seating and tables](#)
- [Access awareness handbooks](#)
- [Australian Standards.](#)

3.9 Spectator and viewing areas

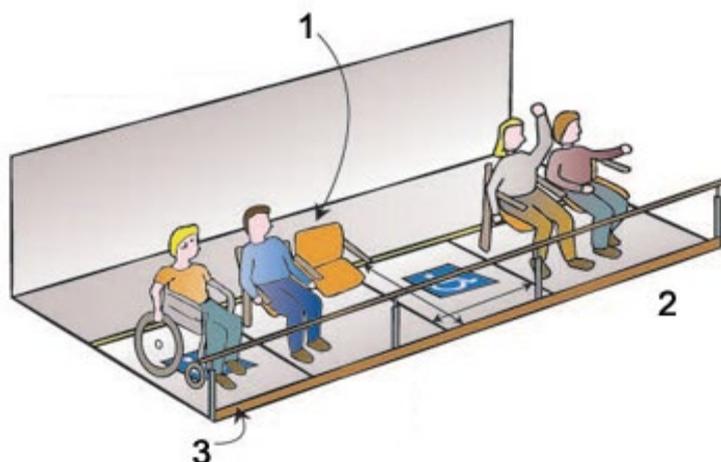
The following key requirements and access dimensions for spectator and viewing areas must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

Key requirements

- A continuous accessible path of travel from the site entry to and through any spectator and viewing area.
- Clear, easy to read signage at the entry to the spectator and viewing area incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Viewing areas connected to, but located off the continuous accessible path of travel, so as not to provide an obstruction to path users.
- A raised viewing area for people who need to remain seated, in areas where viewing is predominantly undertaken by people who are standing.
- Accessible seating spaces available in a variety of equitable locations throughout a building or facility, that allow people to sit together, for example, friends and family, person using a wheelchair and person using an assistance animal.
- Rows of seating that have adequate space between them to allow people to easily move through.
- Additional space available next to seating that will allow a person to store items, for example, wheeled luggage and assistance animal.
- Range of seating with backs and armrests.
- Various height seating suitable for children and adults.
- Removable seating with backs and armrests provided in areas of fixed seating.
- Viewing areas that provide clear lines of sight to activities, events or a scene being viewed.
- Accessible paths, ramps, stairs and seating at any temporary viewing area.
- An appropriate kerb and handrail on any raised viewing platform to prevent people from falling or rolling over an edge.
- Where relevant, accessible viewing spaces for people sitting in vehicles, who may have difficulty in leaving the vehicle.
- Alternatives to viewing areas that cannot be accessed by all people, for example, provision of interpretative elements such as audio visual presentations, displays or architectural models, thermoforms and live television links.
- A hearing augmentation system where an inbuilt amplification system is installed.
- Shade and shelter over some viewing and spectator areas that are located outdoors.
- Access to appropriate toilets for all users including people with mobility challenges, for example, ambulant and unisex accessible toilets.

Key access dimensions

Figure 29: Spectator area



1. Seating with backs and armrests (220 to 300 mm above the seat), for example, at a height of 350 mm suitable for children, 450 mm – general public use, 520 mm – for older adults

2. Wheelchair spaces that are a minimum of 850 mm wide (800 mm acceptable if located at the end of a row) and a minimum of 1250 mm deep

3. A minimum 300 mm kerb on raised viewing platforms where required for safety.

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum 850 mm clear opening width at doorways with circulation space provided at both sides that considers angles of approach.
- A minimum 300 mm kerb on raised viewing platforms where required for safety.
- Hearing augmentation that covers 80% of the floor area served by inbuilt amplification or 95% of the space if a system using receivers or the like is in use.
- Wheelchair spaces that are a minimum of 850 mm wide (800 mm acceptable if located at the end of a row) and a minimum of 1250 mm deep (rear approach) 2450 mm deep (front approach). Fixed wheelchair seating spaces located within a building are to be provided in numbers and sizes that are dependent on their location, the size of the room and their approach.
- Seating with backs and armrests (220 - 300 mm above the seat) at a height of 350 mm - suitable for children, 450 mm - general public use, 520 mm - for older adults).
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 4586 - 2004 Slip Resistance Classification of New Pedestrian Surface Materials
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010

Links to other relevant information

- [All installations](#)
- [Access awareness handbooks](#)
- [Australian Hearing](#)

3.10 Catering for assistance animals

Key requirements

- Advertising material indicating 'Assistance Animals are Welcome' at the location.
- Signage at the entry points indicating 'Assistance Animals Welcome'.
- Animal water bowls co-located with drinking fountains and taps.
- Dog clean up bags co-located with rubbish bins.
- Dog tether posts at key locations in buildings and facilities, reception and public toilets.
- Effective contrasts between tether posts and background and adjacent surfaces.
- Training for staff at premises regarding 'rights and obligations' relating to assistance animals.
- Information available regarding nearest location for toileting of assistance animal.

Key access dimensions

- Dog clean up bags, dropping disposal bins and tether posts located 900 - 1100 mm above the floor/ground surface.
- Dog clean up bags, dropping disposal bins and tether posts with a minimum 30% luminance contrast between background and adjacent surfaces.
- Signage installed within common 'Zones for Viewing' in accordance with Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 - Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 - Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities.

Links to other relevant information

- [Access awareness handbooks](#)
- [Assistance Dogs Australia](#)
- [Australian Support Dogs](#)
- [Guide Dogs](#)
- [Human Rights and Equal Opportunity Commission](#)
- [Lions Hearing Dogs](#)
- [Vision Australia.](#)

3.11 Approaches, onsite roadways and pedestrian crossing

A continuous accessible path of travel is a fundamental requirement for equitable access to the built environment. This should be provided from any car park, public transport or taxi set down area and property boundary to and through any buildings, facilities, installations and key elements within a site. This route can consist of pathways, roadways, pedestrian crossings and ramps. It cannot incorporate any step, stairway, turnstile, revolving door, escalator, moving walk or other impediment.

Key requirements

The key requirements of accessible approaches, on-site roadways and pedestrian crossings include:

- consideration of all modes of transport including pedestrians, bicycles, motor vehicles, scooters, wheelchairs, taxis and buses
- wide pathways and roadways suitable for the expected volume of pedestrians or vehicle traffic
- firm, level, slip resistant ground surfaces in both wet and dry conditions
- minimal cross falls on pathways and at pedestrian crossings
- adequate overhead clearances along the entire length of the access route
- hazard tactile ground surface indicators at pedestrian and vehicle conflicts and pedestrian crossings
- bollards installed to ensure parked vehicles do not encroach onto pathways
- wide openings between any bollards and at gates, with appropriate circulation space available on both sides for ease of access by pedestrians

- landscaping elements that do not create visual confusion within pathway ground surfaces but are incorporated along the edges of pathways to assist with wayfinding, for example, colour contrast edges, low level plantings with specific scents
- seating and shelter for pedestrians at regular intervals along pathways and at public transport stops
- clear, concise, easy to read signage, incorporating international symbols of access or deafness, identifying key elements along access routes
- clear, concise, easy to read signage, incorporating international symbols of access or deafness, identifying shared vehicle and pedestrian pathways indicating designated areas of use
- where possible, separate pedestrian, vehicle and bicycle paths incorporating clearly defined and marked boundaries
- consistent and even lighting (reflected downward - without pooling or producing glare).

Roadways

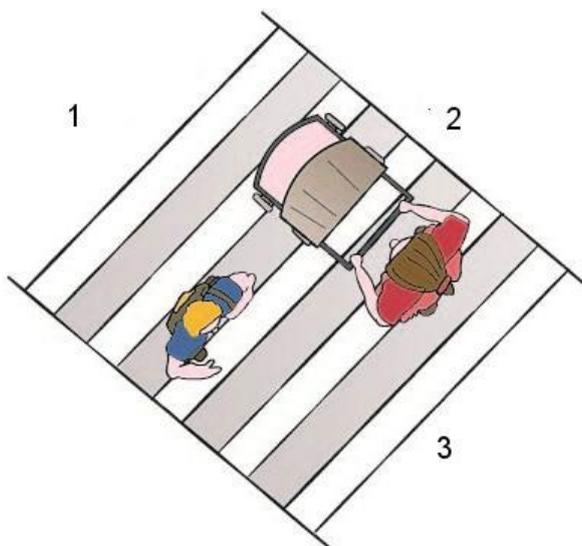
- Clear definition between the roadway and pathway system through the use of coloured ground surfaces or tactile installations.
- Roads that incorporate a direct connection, for example, kerb ramp to pathways at alighting or departure points, for example, taxi ranks, public transport stops and car parks.
- In larger car parks, provision of separate vehicle entry and exit points to assist with the flow of traffic and speed humps strategically located to increase safety.
- Roadways incorporating adequate width and turning circles that are appropriate for the expected traffic type and volume, for example, minibuses and public buses.

Pedestrian Crossing

- Designated pedestrian crossings at regular intervals and appropriate locations.
- Clearly defined pedestrian crossings incorporating a contrasting colour ground surface to adjacent and background surfaces.
- Clearly signed and designated pedestrian crossings that indicate 'right of way for pedestrians', to avoid confusion with traffic calming devices.
- Pedestrian crossings, medians and kerb ramps that are wide and deep enough to allow all users to wait with safety, for example, parent with pram.
- Appropriate kerb ramps that extend across the width of pedestrian crossings.
- Non-slip paintwork at any pedestrian crossing point.
- Controls at signal operated pedestrian crossings that can be easily reached by a person when standing or seated and operated with a closed fist or open palm, incorporating audible, visible and tactile signal notification elements.
- Sensor operated pedestrian crossing controls where possible.
- 'Puffin' pedestrian crossings that extend the crossing time at locations where it is anticipated larger numbers of older adults may require access.
- Pedestrian crossing poles with an effective contrast to background and adjacent surfaces.

Key access dimensions

Figure 30: Pedestrian crossing



1. Appropriate kerb ramps that extend across the width of pedestrian crossings
2. Clearly defined pedestrian crossings incorporating a contrasting colour ground surface to adjacent and background surfaces
3. Non-slip paintwork at any pedestrian crossing point.

- A continuous accessible path of travel that is a minimum of 2000 mm high and 1000 mm wide for an ambulant person, 1200 mm wide for a person using a wheelchair, 1500 mm wide for 2 people to pass each other easily and 1800 mm wide for a person using a wheelchair to turn 180 degrees.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Tactile ground surface indicators set back 300 mm \pm 10 mm from any hazard (600 to 800 mm deep), extending across width of a path adjoining the hazard, and have a minimum of 30% luminance contrast to the surrounding ground surface and background. (Dimensions for tactile ground surface indicators, both hazard and directional, at specific locations and required luminance in accordance with Australian Standards).
- Gradient / cross slope on pathways not steeper than 1:40.
- Kerb ramps that have a maximum rise of 190 mm, length of 1520 mm, grade of 1:8 and a minimum width of 1000 mm.
- Kerb ramps that incorporate a level landing at the top and bottom that considers the direction of travel.
- Audible and visible pedestrian crossing controls to Australian Standards.
- Pedestrian crossing controls of appropriate type and within the appropriate reach ranges in accordance with Australian Standards.
- Minimum 30% luminance contrast between crossing poles, vehicle and pedestrian separation installations, fittings and background and adjacent surfaces.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 1428.4.1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 1428.5: 2010 Communication for People who are Deaf or Hearing Impaired
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 - 2010 Lighting for Roads and Public Spaces
- Disability (Access to Premises - Buildings) Standards 2010

Links to other relevant information

- [Floor and ground surfaces](#)
- [Lighting and contrasts](#)
- [Tracks and pathways](#)
- [Signage and wayfinding](#)
- [Australian Standards](#)
- [VicRoads](#).

3.12 Tracks, pathways, ramps and stairs

Tracks and pathways

A continuous accessible path of travel is a fundamental requirement for equitable access to the built environment. This should be provided from any car park, public transport or taxi set down area and property boundary to and through any buildings, facilities, installations and key elements within a site. This route can consist of pathways, roadways, pedestrian crossings and ramps. It cannot incorporate any step, stairway, turnstile, revolving door, escalator, moving walk, or other impediment.

Key requirements

- consideration of all modes of pedestrian transport including walking, scooters, wheelchairs, prams, strollers and people with assistance animals
- wide pathways suitable for the expected volume of pedestrian traffic
- firm, level, stable, slip resistant, non reflective ground surfaces in both wet and dry conditions. Surfaces including concrete, asphalt or appropriately laid brick paving, well compacted and maintained granitic sand and timber decking are suitable
- any timber decking and grates laid at right angles to the direction of travel
- minimal cross falls on pathways that lead users away from any road edge

- any manholes or service covers installed flush with pathway surface
- adequate overhead clearance along the entire pathway or track length
- hazard tactile ground surface indicators at pedestrian and vehicle conflicts
- wide pathways, suitable where possible for 2 people using mobility aids to pass each other when approaching from opposite directions
- wide turning and passing spaces connected to, but set back from the pathway where the pathway cannot provide adequate space
- bollards installed to ensure parked vehicles do not encroach onto pathways with wide openings and appropriate circulation space on both sides for ease of
- access by pedestrians
- landscaping elements that do not create visual confusion within pathway ground surfaces but are incorporated along the edges of pathways to assist with wayfinding, for example, colour contrast edges, low level plantings with specific scents
- seating and shelter at regular intervals, connected to but setback from the pathways, particularly along longer pathways or tracks and at public transport stops
- directional tactile ground surface indicators between the pathway and key installations, for example, bicycle storage, drinking fountains and seating
- a change of ground surface texture or colour within surfaces of pathways at installations, for example, bicycle storage, drinking fountains, seating that helps designate the area
- ground surfaces along pathway edges, where no kerb and handrail or wall and handrail are available, that are at the same height as the pathway edge
- clear, concise, easy to read signage, incorporating international symbols of access or deafness, identifying key elements along the track or pathway
- clear, concise, easy to read signage, incorporating international symbols of access or deafness, identifying shared vehicle and pedestrian pathways indicating designated areas of use
- where possible, separate pedestrian, vehicle and bicycle paths incorporating clearly defined or marked boundaries
- a ramp alternative to any steps or stairs on a track or pathway
- consistent and even lighting (reflected downward - without pooling or producing glare)
- consistent maintenance regime to eliminate any pot holes, tree roots, overhanging foliage or vegetation or other damage to the track or pathway.

Ramps should incorporate:

- Gentle gradients and easy to grip handrails
- Kerbs on both sides
- Hazard tactile ground surface indicators at the top and bottom
- Landings of appropriate length and interval
- Contrasting ground surface to background and adjacent surfaces

Stairs should incorporate:

- Easy to grip handrails on both sides
- Contrast nosings on all stair treads
- Hazard tactile ground surface indicators at the top and bottom
- Contrasting ground surface to background and adjacent surfaces

Kerb ramps should incorporate:

- Appropriate grade, length and width
- Level landings at top and bottom
- Direct alignment with any opposing kerb ramp and / or median
- Contrasting colour ground surface to assist with recognition
- A standard design throughout the area
- Hazard tactile ground surface indicators where required
- Installation that follows the direct path of travel

Key access dimensions

Figure 31: Accessible track or pathway



1. Minimum 30% luminance contrast between track and pathway edges and background and adjacent surfaces	2. Height minimum of 2000 mm	3. Firm, level, stable ground surface that considers people walking, scooter users, pram user, assistance animals	4. Minimum preferred width 1800 mm
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- A continuous accessible path of travel that is a minimum of 2000 mm high and 1000 mm wide for an ambulant person, 1200 mm wide for a person using a wheelchair, 1500 mm wide for 2 people to pass each other easily and 1800 mm wide for a person using a wheelchair to turn 180 degrees.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.

- Tactile ground surface indicators set back 300 mm ± 10 mm from any hazard (600 - 800 mm deep), extending across width of a path adjoining the hazard, and
- have a minimum of 30% luminance contrast to the surrounding ground surface and background. (Dimensions for tactile ground surface indicators, both hazard and directional, at specific locations and required luminance contrasts in accordance with Australian Standards.).
- Minimum 30% luminance contrast between track and pathway edges and background and adjacent surfaces.
- A minimum of 500 mm set back from the track/pathway for bins, seats, lights and bicycle racks.
- A section at least 1800mm wide x 2000 mm long every 20m to allow pedestrians to pass each other with ease. A 1500 mm x 1500 mm space at turns of 90 degrees and 1540 x 2070 mm where turns are greater than 90 degrees.
- Gradient / cross slope on pathways not steeper than 1:40.
- Where gradients are 1:33, landings at least 1200 mm long at maximum intervals of 25 m.
- Where gradients are 1:20, landings at least 1200 mm long at maximum intervals of 15 m.
- Maximum cross slope of 1:40 (1:33 acceptable on bitumen walkways, ramps and landings).
- A maximum grade of 1:14 (1:20 preferred) on any ramp that is greater in length than 1900 mm.
- Ramps incorporating kerbs and handrails on both sides and appropriate landings in accordance with Australian Standards.
- Stairs incorporating nosings and handrails on both sides in accordance with Australian Standards.
- Kerb ramps that have a maximum rise of 190 mm, length of 1520 mm, grade of 1:8 and a minimum width of 1000 mm.
- Kerb ramps incorporating a level landing at the top and bottom, which considers the direction of travel.
- Lighting installed to required lux levels in accordance with range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 - 2009 Design for access and mobility - General Requirements for Access - New Buildings
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 1428.4:1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment

- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS/NZS 1680 - 2009 Interior Lighting - Safe Movement
- AS 2156 - 2001 Walking Tracks - Classification and Signage
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Lighting and contrasts](#)
- [Signage and wayfinding](#)
- [Australian Standards](#)
- [Vicroads.](#)

Ramps

There are a variety of ramps to provide appropriate access to buildings and facilities and throughout the external environment. These include:

- **Step ramp:** Not steeper than 1:10 and not longer than 1900 mm - often used to replace a step.
- **Threshold ramp:** Not steeper than 1:8 and not longer than 280 mm - often used at a doorway.
- **Kerb ramp:** Not steeper than 1:8 and not longer than 1520 mm - often used at a road crossing point.
- **Ramp:** Steeper than 1:20 but not steeper than 1:14 – used as a means of access to a wide variety of buildings and facilities.

Key requirements

- A continuous accessible path of travel from the property entrance or any onsite car park to any ramp.
- Clear, easy to read signage to, and at any ramp, incorporating relevant international symbols of access or deafness that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Identification of the ramp, for example, colour or signage, to assist users to determine their location or level within a building.
- A gentle grade that allows all users to use the ramp independently.
- Kerbs on both sides.
- Adequate width to accommodate expected pedestrian volumes.
- Hazard tactile ground surface indicators at the top and bottom.
- A slip resistant surface in wet and dry conditions along the entire length.
- Low pile carpet (where carpet is installed).

- Handrails on both sides that are easy to grip and do not create an obstruction to the passage of the hand along the entire handrail.
- Handrails at appropriate heights that cater for both adults and children.
- A raised dome on handrails to notify users of the beginning and end of the ramp (where required).
- Landings and rest areas that include seating on long ramps.
- An accessible set of stairs or a lift as an alternative to a ramp, for people who do not like or who are unable to walk easily on an angled surface, and appropriate signage to inform users of location of these elements.
- Ramps which are set back from any property boundary or internal corridor and do not encroach on the transverse path of travel, so as not to interrupt the flow of pedestrian traffic.
- Shade and shelter over ramps in external areas leading to principal pedestrian entrances.
- Consistent and even lighting (reflected downward - without pooling or producing glare).

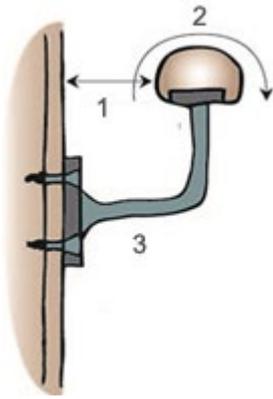
Key access dimensions

Figure 32: Side view of a ramp



1. Height of handrails consistent between 865 to 1000 mm above floor level. Ramp length a minimum of 1900 mm with a gradient a maximum of 1:14 (1:20 preferred)
2. Handrails and kerbs on both sides of ramp
3. Tactile ground surface indicators installed at the bottom of the ramp
4. Kerbs on both sides of ramps that meet Australian Standard requirements (dependent on construction type)
5. Setback of ramps a minimum of 900 mm at any property boundary and a minimum of 400 mm at any internal corridor (refer to Australian Standards)

Figure 33: Handrail



1. Clearance from side wall minimum of 50 mm
2. Handrail 30 to 50 mm diameter for minimum 270 degrees
3. Handrails that extend a minimum of 300 mm past the top and bottom of any ramp

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide to any ramp.
- Ramp length a minimum of 1900 mm with a gradient a maximum of 1:14 (1:20 preferred).
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Landings at the top and bottom of ramps and at a minimum of every 9m (6m preferred) on 1:14 grade ramps and every 15m on 1:20 grade ramps.
- Curve in any ramp at a minimum width of 1500 mm.
- Fixed carpet (where carpet provided) with a pile height or pile thickness not exceeding 11mm and carpet backing thickness not exceeding 4mm.
- Handrails on both sides with a circular diameter of 30 - 50 mm for a minimum of 270 degrees (at the top of the arc), at a consistent height of between 865 - 1000 mm, and that extend horizontally for 300 mm past the end of the ramp. Ends that return to a side post or wall or downwards through 180°, and fixed or constructed to provide no obstruction to the passage of the hand along the entire rail.
- Handrails with a minimum clearance of 50 mm from an adjacent wall and a minimum clearance of 600 mm above the handrail.
- Handrails with a minimum clearance of 1000 mm in between.
- Handrails with a domed button 4 to 5 mm high x 10 to 12mm diameter provided 150 mm from each end (where required).
- Kerbs on both sides of ramps that meet Australian Standard requirements, (dependent on construction type).
- Tactile ground surface indicators set back 300 mm \pm 10 mm from the top and bottom of ramp (600 to 800 mm deep), extending across the width of a ramp with a minimum of 30% luminance contrast to their adjoining and background surfaces. Hazard indicators installed on ramp landings in accordance with Australian Standards. (Dimensions for tactile ground surface indicators, both hazard and directional, at specific locations and required luminance contrasts in accordance with Australian Standards).

- Setback of ramps a minimum of 900 mm at any property boundary and a minimum of 400 mm at any internal corridor.
- Minimum 30% luminance contrast between ramps, handrails, kerbs and background and adjacent surfaces.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 - 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 1428.4:1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS/NZS 1680 - 2009 Interior Lighting - Safe Movement
- AS 2156 - 2001 Walking Tracks - Classification and Signage
- Disability (Access to Premises - Buildings) Standards 2010

Links to other relevant information

- [Lighting and contrasts](#)
- [Signage and wayfinding](#)
- [Australian Standards](#)
- [The Good The Bad and The Ugly](#)

Stairs

Key requirements

- A continuous accessible path of travel from the property entrance and any onsite car park to stairs as well as an alternative such as a ramp or lift.
- An alternative to stairs, for example, ramp or lift and appropriate signage to inform users of location.
- Clear, easy to read signage to stairs incorporating relevant international symbols of access or deafness that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Identification of the stairs, for example, colour or signage, to assist users to determine their location or level within a building.
- Adequate width to accommodate expected pedestrian volumes.
- Consistent tread height throughout stairway to reduce risk of trips / falls.
- Hazard tactile ground surface indicators at the top and bottom.
- Slip resistant step treads in wet and dry conditions along the entire stairway.
- Low pile carpet (where carpet is installed).
- Handrails on both sides that are easy to grip and do not create an obstruction to the passage of the hand along the entire handrail.
- Handrails at appropriate heights that cater for both adults and children.
- A raised dome on handrails to notify users of the beginning and end of the stairway (where required).
- Rest areas that include seating at landings on long stairways.
- Stairs which are set back from any property boundary or internal corridor and do not encroach on the transverse path of travel, so as not to interrupt the flow of pedestrian traffic.
- Shade and shelter over stairs in external areas leading to principal pedestrian entrances.
- Consistent and even lighting (reflected downward - without pooling or producing glare).

Key access dimensions

Figure 34: Side view of stairs



1. Handrails installed at a consistent height of between 865 to 1000 mm above floor level
2. Handrails that are easy to grip along the entire length of the rail
3. Tactile ground surface indicators at top and bottom of stairs
4. Provide 50 to 75 mm strip of 30% luminance contrast across the full width of the horizontal component of each stair tread. The strip may be set back a maximum of 15 mm from the front of the nosing
5. Steps with treads between 150 to 165 mm high and a minimum depth of 275 to 300 mm.

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide to the stairs.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Steps with treads between 150 - 165 mm high and a minimum depth of 275 - 300 mm.
- Provision of a 50 - 75 mm strip of 30% luminance contrast across the full width of the horizontal component of each stair tread, that if setback from the nosing is no more than 15 mm from the front.
- Enclosed stair risers without any lip overhang and of opaque construction.
- Fixed carpet (where carpet provided) with a pile height or pile thickness not exceeding 11mm and carpet backing thickness not exceeding 4mm.
- Tactile ground surface indicators set back 300 mm \pm 10 mm from the top and bottom of stairs (600 to 800 mm deep), and have a minimum of 30% luminance contrast to their adjoining and background surfaces. (Dimensions for tactile ground surface indicators, both hazard and directional, at specific locations and required luminance contrasts in accordance with Australian Standards).
- Handrails on both sides with a circular diameter of 30 - 50 mm for a minimum of 270 degrees (at the top of the arc) are at a consistent height of between 865 - 1000 mm, and extend horizontally 300 mm past the end of the top step and one tread width plus 300 mm past the end of the bottom step. Ends are to return to a side post or wall or downwards through 180 degrees, and fixed or constructed to provide no obstruction to the passage of the hand along the entire rail.

- Handrails with a domed button 4 to 5 mm high x 10 to 12mm diameter provided 150 mm from each end (where required).
- Handrails with a minimum clearance of 1000 mm in between.
- Handrails with a minimum clearance of 50 mm from an adjacent wall and a minimum clearance of 600 mm above the handrail.
- Setback of stairs a minimum of 900 mm at any property boundary and setback in accordance with the Australian Standards at any internal corridor.
- Minimum 30% luminance contrast between stairs, handrails, and background and adjacent surfaces.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.
- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide to entrances.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 - 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 1428.4:1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS/NZS 1680 - 2009 Interior Lighting - Safe Movement
- AS 2156 - 2001 Walking Tracks - Classification and Signage
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Lighting and contrasts](#)
- [Signage and wayfinding](#)
- [Australian Standards](#)
- [The Good The Bad and The Ugly.](#)

Floor and ground surfaces

Key requirements

- Consideration of all modes of pedestrian transport including walking, scooters, wheelchairs, prams, strollers and people with assistance animals, when selecting floor surface materials.
- Level, slip resistant, secured floor surfaces in both wet and dry conditions.
- Non reflective floor surfaces in both wet and dry conditions.
- Surfaces including concrete, asphalt or appropriately laid brick paving, well compacted and maintained granitic sand or timber decking in outdoor areas.
- Low pile carpet in internal areas laid in line with the path of travel.
- Vinyl, timber and synthetic surfaces which are level and slip resistant in wet and dry conditions.
- Adequate drainage within and along outdoor pathway ground surfaces.
- Any timber decking and grates laid at right angles to the direction of travel.
- Any manholes or service covers installed flush with pathway ground surface.
- A change of ground surface texture or colour within surfaces of pathways at installations, for example, bicycle storage, drinking fountains, seating, that helps designate the area.
- Accessways with the grade of a walkway, have a ground surface next to the pathway edge which is at the same level as the walkway (where no kerb and handrail; or wall and handrail is available).
- Joins in floor or ground surfaces that do not produce a lip or tripping hazard.
- Floor and ground surfaces that do not include use of loose mats.
- Consistent maintenance regime to eliminate any pot holes, tree roots, damaged carpet or vinyl.

Key access dimensions

- Fixed carpet (where carpet provided) with a pile height or pile thickness not exceeding 11mm and carpet backing thickness not exceeding 4mm.
- Floor surface finishes in accordance with the range in Australian Standards.
- Floor surface connections in accordance with the range in Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 - 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 1428.4:1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS/NZS 1680 - 2009 Interior Lighting - Safe Movement
- AS 2156 - 2001 Walking Tracks - Classification and Signage
- Disability (Access to Premises - Buildings) Standards 2010
- AS 1680 - 2009 Interior Lighting - Safe Movement.

Links to other relevant information

- [Lighting and contrasts](#)
- [Signage and wayfinding](#)
- [Australian Standards](#)
- [The Good The Bad and The Ugly.](#)

Lifts (passenger)

The following key requirements and key access dimensions for fire extinguishers and alarms must be considered in addition to those for all installations.

Key requirements

- A continuous accessible path of travel from the building entrance to and into any lift.
- A clearly signed accessible alternative to any lift, in the event of a lift breakdown.
- Clear, easy to read signage incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Lift lobby that is close to the principal building entrance.
- Lift lobby that is wide enough for all users and caters for various angles of approach, for example, front on, side on.
- Lift lobby that is large enough (where required) to cater for high volumes of people waiting, without interrupting the flow of pedestrian traffic to the rest of the building.
- Wide lift entrance doorway, incorporating presence and movement detection sensors, that remains open long enough for ease of entry and exit.

- Clearly marked safety strip across any fully glazed doors or walls.
- Lift car that allows a person using a mobility aid, for example, pram, stroller, wheelchair or pulled luggage, to turn 180 degrees.
- Mirror on the back wall of small lift cars, to assist a person using a mobility aid needing to reverse out of the lift.
- Floor surfaces that are slip resistant in wet and dry conditions.
- Low pile carpet (where carpet is installed).
- Effective contrasts between doorway and adjacent and background surfaces.
- Non reflective internal walls.
- Lift buttons located in the same location on each floor level, for example, left of lift car on ground level, level 1, 2 and 3.
- Lift buttons that are located on both the sides of the lift interior.
- Visual and tactile elements next to lift buttons.
- Lift buttons in larger buildings configured in the layout of a telephone keypad, enabling a person to 'dial up' their desired floor.
- Handrails located on the interior rear and side walls of the lift.
- A lift car that stops accurately at each floor level without a step or gap to the exterior floor surface.
- Audible announcement or bell at arrival of desired floor.
- Hearing augmentation system where an inbuilt amplification is installed.
- Clearly identified emergency buttons and procedures (in alternative formats).
- Consistent and even lighting (reflected downward - without pooling or providing glare) at the entrance door and within the lift.

Key access dimensions

Figure 35: View from inside a lift



1. Centre of lift buttons located 900 to 1200 mm high
2. Minimum 900 mm clear opening width at lift entrance
3. Handrails not more than 500 mm from any button or operating device
4. Internal handrail, minimum 600 mm long with the top installed 850 to 950 mm above floor level, and of an appropriate diameter (30 to 50 mm) and circumference minimum 270 degrees.

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide to the lift.
- A minimum 900 mm clear opening width at lift entrance.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- A minimum floor area 1100 x 1400 mm if lift travels less than 12m.
- A minimum floor area 1400 x 1600 mm if lift travels more than 12m.
- Fixed carpet (where carpet provided) with a pile height or pile thickness not exceeding 11mm and carpet backing thickness not exceeding 4mm.
- Centre of lift buttons located 900 - 1200 mm high.
- Key pad buttons where provided located 900 - 1100 mm above floor level with a tactile marker on the 5.
- Internal handrail, minimum 600 mm long with the top installed 850 - 950 mm above floor level, and of an appropriate diameter (30 - 50 mm) and circumference minimum 270 degrees.
- Handrails are to be installed not more than 500 mm from any button or operating device.
- A dwell time at any fully opened lift door a minimum of 6 seconds.
- Lift travelling more than 12 m with an oral identification at each floor called, lifts travelling less than 12 m with a tone that sounds when the lift passes or arrives at a floor.
- Door threshold a maximum of 12 mm, either above or below the door sill and the landing sill on any floor level.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 - 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 1428.4:1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS/NZS 1680 - 2009 Interior Lighting - Safe Movement
- AS 2156 - 2001 Walking Tracks - Classification and Signage
- AS 1735 Lifts, Escalators and Moving Walks
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Lighting and contrasts](#)
- [Signage and wayfinding](#)
- [Australian Standards](#)
- [The Good The Bad and The Ugly.](#)

Entrances and doorways

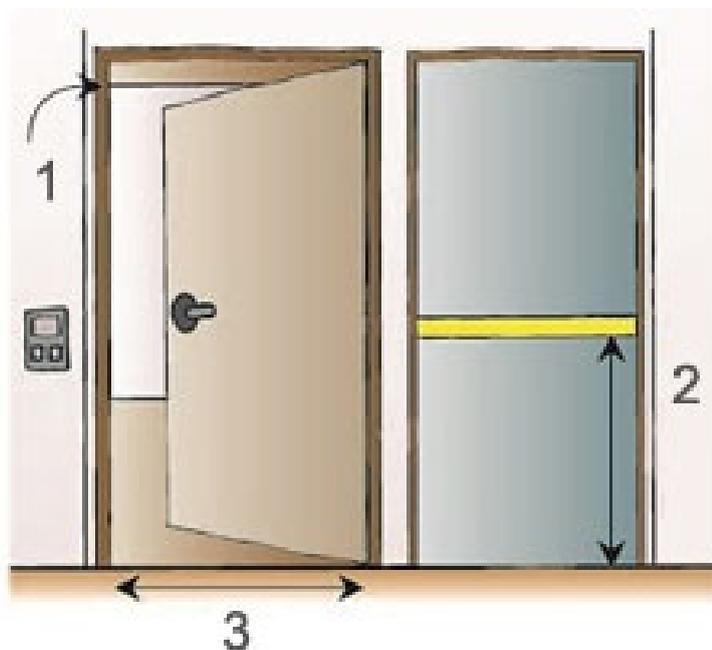
Key requirements

- A continuous accessible path of travel from the property entrance and any onsite car park to principal entrances.
- A range of accessible entrance points in larger buildings.
- Clear, easy to read signage at entrances, incorporating relevant international symbols of access or deafness that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.
- Entrances that are visible from any vehicle access routes, set down areas and car parks with appropriate signage that directs users to their desired destination.
- Path surfaces at entrances with a contrast colour, texture or material to assist with identification of the entrance.
- Level transition or an appropriate threshold or step ramp at entrances.
- Wide doorways (self-opening preferred), that are not heavy or hard to open and provide appropriate circulation space at entrances.
- Effective motion and presence sensors at any automatic opening doors.
- D or D lever style door handles in contrast to background and adjacent surfaces on all entrance doors where handles are required.
- Easy to adjust door closers.
- Door controls that can be reached by a person when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements, for example, entry buzzer and afterhours access.
- Door controls that are located on the path of travel to the door, to allow adequate time when in operation for a person to move fully through the door prior to the door closing.
- Airlocks at any entrances that allow ease of movement, particularly for people using mobility aids or assistance animals.
- Alternatives to swing doors where circulation space may be limited, for example, sliding doors.
- Glazing panels in entrance doors to assist users to view pedestrian traffic from either side.
- Appropriate safety strip on any fully glazed entrance doors or adjacent fully glazed wall capable of being mistaken as an entrance.
- Metal kick plate at the bottom of doors to protect against damage by prams, strollers and wheelchairs.

- Entrance doors that can be opened from the outside of a room in an emergency.
- Use of screens or baffles at entrances (where appropriate, for example, toilets) that eliminates the need for doors.
- Effective contrasts between doorways, controls, walls, leading edge of doors and adjacent and background surfaces.
- Clear, accessible space inside entrances of a building that allows users to adjust to changed lighting conditions within the building interior.
- Glare free floor surfaces inside any building entrance that may be perceived as being slippery.
- Seating with backs and armrests that is located near the entrance to a building and gives clear lines of sight to any taxi zone, set down or waiting area.
- Shade and shelter at building entrance doors, to allow people to wait out of inclement weather if doors are not open.
- Shade and shelter at entrances in contrast to background and surrounding surfaces to assist with identification of the entrance.
- Alternatives to queuing areas at entrances that require people to stand for long periods.
- Adequate circulation space through queuing areas at entrances for people with mobility aids, for example, prams, wheelchairs.
- Lighting at entrances that has a higher lux level than the surrounding lighting to assist with identification and safety.

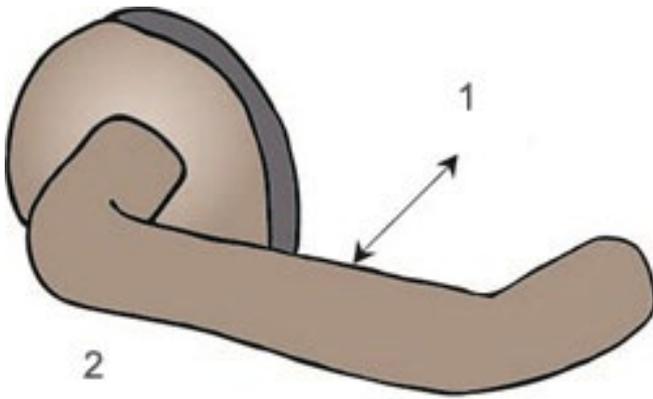
Key access dimensions

Figure 36: Door entrance



1. Minimum 50 mm luminance contrast at entrance
2. Solid contrast strip on fully glazed doorway / sidelight (window). Height of strip bottom edge 900 to 1000 mm above floor level
3. Minimum clear door opening width 850 mm

Figure 37: D lever style door handle



1. Doorhandles with 35 mm and not more than 45 mm clearance between the handle (in the centre) and the back plate or door face
2. D or D lever style handle with return, installed at a height of 900 to 1100 mm above floor level

- A continuous accessible path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide to entrances.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Any non-accessible building entrance to be located not more than 50 m away from an accessible entrance.
- If a pedestrian entrance consists of not more than 3 doorways - not less than one of those doorways must be accessible.
- If the pedestrian entrance consists of more than 3 doorways - not less than 50% of those doorways must be accessible.
- A minimum 850 mm clear opening width at entrances with circulation space on both sides that considers angles of approach and incorporates level landings (including the operative leaf of a multiple leaf door).
- Maximum rise of 35 mm, 280 mm length and gradient of 1:8 at any threshold ramps.
- Step ramps to meet circulation spaces and angles of approach at doorways in accordance with the range in Australian Standards.
- Solid strip a minimum of 75 mm wide installed with the lower edge at a height of 900 - 1000 mm above floor level across the width of any fully glazed door or glass wall that could be mistaken for an entrance. A minimum 30% luminance contrast to the background is also required.
- A maximum force of 20N at the entrance door handle to open doors, and door closers that are adjustable.
- Any entrance buzzer or intercom 900 to 1100 mm high.
- D type or D type lever style door handles on any doors requiring handles at 900 - 1100 mm high.
- Push button controls that are a minimum of 25mm diameter and sit proud of the wall surface.

- Door controls and switches that need to be grasped or turned at 900 to 1100 mm high.
- Door controls that only need to be touched at a height of 900 to 1250 mm and not less than 500 mm from an internal corner.
- Door controls that only need to be pushed, for example, panic bars on egress routes, at a height of 900 to 1200 mm.
- Door controls that are manually operated for power operated entrance doors, at a height of 900 to 1100 mm, no closer than 500 mm from an internal corner.
- Door handles with 35 mm and not more than 45 mm clearance between the handle (in the centre) and the back plate or door face.
- A pull bar or handrail at a height of between 900 to 1100 mm on any outward opening door that is not self closing.
- Sliding entrance door handles a minimum of 60 mm from the door jamb or door stop when closed / open.
- Snibs with a lever handle a minimum of 45 mm from the centre of the spindle.
- Minimum 30 mm x 30 mm buttons or switches for entrance controls, proud of surrounding surfaces.
- A minimum distance of 1450 mm between entrance doorways within an airlock or vestibule, plus the door leaf width if the door opens into the space.
- Minimum 30% luminance contrast between doors, doorway, controls and background and adjacent surfaces.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with Australian Standards.

Relevant Australian Standards for fire extinguishers and alarms

- AS 1428.1 - 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 1428.4:1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 4586 - 2013 Slip Resistance Classification of New Pedestrian Surface Materials
- AS/NZS 1158 Set:2010 Lighting for Roads and Public Spaces
- AS/NZS 1680 - 2009 Interior Lighting - Safe Movement
- AS 2156 - 2001 Walking Tracks - Classification and Signage
- AS 1680 - 2009 Interior Lighting - Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [Boom gates and entry control points](#)
- [Floor and ground surfaces](#)
- [Keys, keypads and padlocks](#)
- [Lighting and contrasts](#)
- [Baffles and screens](#)
- [Shade and shelter](#)
- [Signage and wayfinding](#)
- [Australian Standards](#)
- [The Good The Bad and The Ugly.](#)

4.



Sport and recreation settings

The following sections contain principles that can be interpreted and adapted to suit a number of indoor and outdoor sport and recreation settings.

4.1 Skate parks

This section contains principles that can be interpreted and adapted to suit the outdoor recreation setting of skate parks.

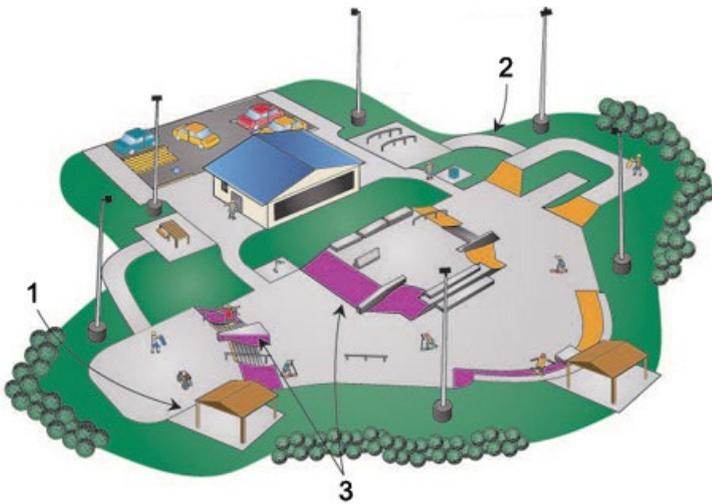
Outdoor and indoor sport and recreation settings vary considerably in their design, size, use and location, from the venue for a chess game, to a football ground.

This setting is described in terms of its role and use, outlining design principles to consider and to support use by everyone. Universal design key requirements and minimum standard access dimensions for specific elements relating to facilities and installations are provided for design that will assist in maximising the effective use of all areas.

The universal design key requirements have been developed as an easy to access checklist of issues to consider and the minimum access dimensions are based on the Australian Standards for Access and Mobility. While these Standards relate to the requirements of people with a range of access challenges and disabilities, they often generally improve access for all people.

Skate parks are often located in larger parks and reserves however they can also be designed as stand alone facilities catering for a wide range of users. These users can include younger children with bicycles and scooters as well as older children and teenagers using skate boards, roller blades and bikes. Many adults are also keen skateboarders, so consideration of the access needs of everyone is important.

Figure 38: An example of a skate park setting



1. Provide shade over some of the skating elements, as well as over some seating and drinking fountains adjacent to these, will support all users and spectators

2. A continuous accessible path of travel within and around each of the key zones within the skate and bike riding area

3. It is important to consider colour contrasts to differentiate between horizontal and vertical elements and surfaces.

Design Principles

The following key design principles should be considered when developing or upgrading skate parks.

Connections

All elements within skate parks should be connected via a continuous accessible path of travel, for example, car parking, toilets, buildings, play areas, drinking fountains and seating. These elements should be linked so that anyone can easily move to and through all of them and enjoy the location and the facilities to the maximum extent.

Approach

Skate parks require approach routes for both vehicles and pedestrians. These should be well signed with entry points that users can easily find. Use of environmental or architectural cues, a line of trees leading to the entry or similar structures that identify the entry point can assist.

Parking spaces for vehicles of various size and use, including cars, mini buses and bicycles should be provided in any onsite car parking area. Consideration should be given to vehicles with side and rear loading capacity for people who may be using mobility aids, as well as enough overhead clearance to load and upload items stored on a vehicle's roof.

Shade and shelter over some parking bays that may be used by people who take a little longer to enter or exit their vehicle are also useful. These bays should be located as close as possible to the entry of the skate park. The ground surface of the parking area, particularly at designated accessible parking bays, should be level and free from loose material. Use of trees or shrubs that drop foliage or seed pods should be avoided.

An uninterrupted path of travel, free from any hazards or difficult or uneven terrain, should lead users from the car park to the entry points of the skate park.

Drop off areas that can cater for a variety of vehicles, for example, bus, taxi or car, should also be provided as close to the principal entry points as possible.

Entry Points

As well as being easily identifiable and incorporating effective contrasts to the background area, points of entry, including site, paths and building entrances, should be wide enough to cater for the access needs of all users. This includes people who may be using mobility aids such as twin prams, scooters or wheelchairs and, for example, an adult with a child who is walking, but who needs to be held by the hand or a person with an assistance animal.

Consideration should also be given to the type and weight of any gates or doors that may need to be used, to ensure they are not too heavy or difficult to operate.

Latches that can be used easily with one hand that are located at a low height for ease of use by a smaller person or someone using a wheelchair are important. Entry points that incorporate turnstiles, chicanes, or queuing lines can be difficult for some people to manage and alternatives should be provided. Appropriate access through security gates, particularly during a temporary festival or event in the skate park, should also be considered.

Paths

Continuous, accessible paths of travel free from obstacles should be provided. They should incorporate alternatives to steps, be firm, stable and slip resistant, and avoid excessive slopes and crossfalls whenever possible. Ramps with appropriate gradients, kerbs, handrails and landing and resting points should be provided where slopes cannot be avoided.

Paths should incorporate clear lines of sight at key decision making points, as well as visible and textural indication of any hazards, particularly at any location where there may be a pedestrian and vehicle conflict.

Paths should be wide enough for people to easily pass each other when coming from opposite directions. The width of the pathway should be considered in light of the number of expected users, for example, in areas that attract many people, pathways should be wide enough to allow groups of people to pass each other, including users of a range of mobility aids such as prams, walking frames and wheelchairs.

Spectator Areas

Spectator areas for everyone should be provided at various locations around the skate park and skating elements.

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Consideration should be given to locations that will cater for users of mobility aids such as prams, strollers, wheelchairs, scooters and assistance animals (animals that have been trained to perform tasks that assist people with disabilities), so people can sit with family and friends.

All spectator seating and viewing areas must have clear lines of sight to the skating area, scoreboards and television monitors (wherever provided).

Alternative scoring systems that assist people with hearing and vision limitations should also be provided. If a sound amplification system is provided, assistive hearing devices should also be installed to assist spectators with hearing impairment. Assistance hearing devices can be used with or instead of hearing devices.

Any spectator areas along paths should be designed so that people do not obstruct the path when stopping to view the activity. Spaces should be provided beside, but connected to the path, for effective use by everyone. A wider section of path or an extended area beside the path, with a firm, level and slip resistant surface should be available.

Consideration should be given to installing seating with backs and armrests at some of these locations with enough room for users of a range of mobility aids to sit off the pathway with other people.

Where areas are reserved for spectator viewing from vehicles, spaces should be provided for people who may not easily be able to get out of their vehicle, or who require additional space to manoeuvre mobility aids when entering and exiting the vehicle.

The location of these spaces needs to be planned effectively and any vegetation and fencing designed accordingly. Fence height and construction are prime considerations.

Spectator areas that are installed above ground level, such as viewing platforms, should incorporate barrier-free access with kerbs, easy to grip handrails and safety barriers that are effective, but don't impede the view, particularly for a smaller person, a child sitting in a stroller or a person sitting in a wheelchair.

Tiered spectator areas or scoring towers can be made easier to use by considering the gradient of ramps and the incorporation of easy to grip handrails and design of stairs, including using contrast nosings on the stair treads. Firm, slip resistant surface finishes, provision of seating and hooped handrails at the end of seating rows, as well as shade and drinking water at the top, will also assist many people to enjoy the experience.

Seating spaces should also be deep and wide enough to enable a person to feel safe from falling if in a tiered spectator area.

Lifts should be provided in structures that are designed for spectators to view skating activities from levels above the ground.

Landscape design

Landscape elements can include paths and garden beds, plants, trees and shrubs and interactive components related to the skating area, statues, sculptures and water features, as well as a variety of other landscape elements. These are all key components of landscaping in skate park surrounds and consideration should be given to location, access, interpretation, usability and safety for everyone.

Limitations to a person's mobility, vision and hearing as well as the interpretation needs of both children and adults, should be taken into account in the design and access to these elements.

Key design issues to consider include:

- the selection and use of trees with foliage that does not overhang paths and drop branches, seed pods, berries or bark, which can create barriers for all users
- use of landscaping design and elements to assist with wayfinding. For example:
- planting of shade trees and plants with different aromas and sounds that can assist users with wayfinding through the area as well as enhance the ambience of the space and create a sense of wellbeing
- a large sculpture near the entry of a building that can act as a key wayfinding element to assist users to find their way to the entry point
- consistent use of lightly textured paving, across a pathway to identify the direction to a viewing or seating area which assists people with limitations to vision, and other people when looking for somewhere to rest
- easy to find and follow paths of travel created by the use of low growing plants along path edges, to installations such as skate viewing areas or drinking fountains
- installation of interesting engagement points such as a skating maze or labyrinth, to encourage exploration and 'safe' risk taking
- installation of sculptures and structures that can be 'felt' as well as 'seen'
- incorporating interesting seating designs, with backs and armrests, within landscape structures
- effective maintenance of sight lines, particularly in areas where key decision making is required, in isolated locations where personal safety could be compromised, or near any family use areas such as playspaces.

Installations

Installations such as litter bins, seating, lighting drinking fountains (incorporating a low height dog bowl), dog dropping collection points and other installations must be usable by everyone. These should be located off, but connected to, a continuous accessible path of travel. People should be able to easily approach, reach and use the installation.

All installations should incorporate low height, easy to use controls, that can be reached by a smaller person. They should incorporate adequate leg clearance underneath to accommodate someone who is seated. Consideration of the angles of approach and clear space for a person to move around the installation is also important.

Controls with large push buttons that protrude or extend beyond surrounding surface or large levers are usually easier to use. Avoid any controls that require a person to use fine motor skills like 'one pointed finger' or that require a constant pressure to operate. The ability for one handed operation is preferred. Sensor operated controls that activate by sensing movement underneath or close to the installation also support ease of use.

The use of effective colour and luminance contrast to adjacent and background surfaces, on installations and elements within installations, will make them easier to identify and also assist with understanding how they are used.

Picnic areas

Rest and picnic areas should include seating with backs and armrests and tables with extended ends or clear spaces to allow for a person using a wheelchair to move underneath or a person to clip on a child restraint.

Barbecues must be useable by everyone with controls at the front of the hot plate. This ensures they are easy to reach and eliminates the need for people to reach over the top of the hot plate.

A level bench top next to the hotplate made from glare free, heat resistant material, allows a person to move hot pans and other items easily on and off the hot plate, without the need to lift heavy items.

Barbecues should be located off, but connected to, a continuous accessible path of travel as well as being close to other important facilities such as toilets and playspaces.

Shade and shelter should be provided over some of these areas so that, depending on weather conditions, people can choose what will best suit their needs.

Where picnic and rest areas incorporate structures, such as a rotunda, there should be level or step free access available, as an alternative to stairs.

Buildings

All buildings should be located on a continuous accessible path of travel from the car parking and pedestrian entry points of the skate park. They should provide level, step free entry with no revolving doors or turnstiles and with wide door openings to accommodate all users, including people with mobility aids such as prams, strollers, wheelchairs or assistance animals. Self-opening doors are preferred, with effective contrasts across any glass doors or areas that could be mistaken for a doorway, to ensure that the safety of users is not compromised.

Consideration should also be given to shelter close to, but not obstructing the principal entries, where some people may wish to store mobility aids while using the building.

Wide internal walkways and doorways, clear of any obstructions on the floor surface and walls, and areas to pass easily are important. Level, slip resistant floor surfaces, in both wet and dry conditions, that do not incorporate any lips or tripping hazards should be maintained. Access into each room of the building is necessary so that users can participate in all activities and use required facilities. Fixtures and fittings that can be accessed by a smaller person or a child, as well as someone who is seated are necessary, for example, at customer service counters and information and display areas.

Any controls that are required to operate building elements such as lights or doors, should be easy to grip, see, reach and operate and be supplemented with clear, concise instructions for use where necessary. These instructions should be provided in a range of formats, for example, written, audio and tactile to ensure that all users can effectively interpret the information provided.

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In multiple level buildings, either ramps with appropriate gradients, or lifts, should be provided to upper levels to support ease of use and movement. These should be easy to locate, with consideration given to the use of effective contrasts as well as raised tactile and Braille signage. Lifts should incorporate buttons that include raised tactile elements as well as Braille close to the buttons to support effective interpretation and wayfinding. Audio announcements should also be installed to identify floor levels. Any stairs should incorporate effective contrast nosings on the stair treads. Stairs and ramps require easy to grip handrails and tactile ground surface indicators at the top and bottom.

Hearing augmentation should be provided in any buildings where people may meet, for example, to begin a skate boarding competition or activity or where there are interactive displays that people can listen to. Captions on screens for people who may have limitations to hearing, as well as audio or tactile alternatives for people who may have limitations to vision should also be considered. Good lighting is necessary for all users. Any buildings that incorporate kitchen or dining areas should provide ease of access for everyone and incorporate a range of tables and seating heights and types for children and adults. Tables with extended ends so a person using a wheelchair can move underneath, lower height or adjustable benches, leg clearances under fixtures such as sinks and benches, access to taps, cupboards and equipment should all be considered.

Toilets and change rooms

If toilets and change rooms are provided, they should be available for use by everyone. In addition to male and female areas, unisex accessible toilets, showers and change rooms are required as these can be effectively used by children as well as adults and carers, including people with a range of access challenges. Key elements to consider include:

- located on a continuous accessible path of travel from the car parking and pedestrian entry
- adequate room size and circulation space
- wide door opening, with a sliding door where possible
- easy to see and use door occupied indicator, handle and flushing control
- appropriate grab rails at the side and back of the toilet pan
- appropriate toilet pan distance from the side and rear wall
- toilet paper that is easily reached from the pan
- soap dispenser and hand dryer that are easily reached from the hand basin
- hand basin at an accessible height with appropriate leg clearance underneath
- baby change table where space allows
- adjustable height shower head
- non-slip shower seat with legs for support
- grab rails on walls of shower
- level, slip resistant floor surfaces in both wet and dry conditions
- adult change table with a hoist
- interconnecting change spaces with a lockable door in between

- facilities for both left and right handed users
- provision of ambulant accessible facilities which are useful for people who use mobility aids such as prams and strollers.

Water

The availability of drinking water for both people and animals is important. Children and adults as well as people using assistance animals will require access to drinking fountains, bowls or other ways of obtaining drinking water. Drinking fountains that are easy to reach, have large lever handles for operation, and incorporate a low level drinking bowl for an assistance animal, support access for everyone. A firm slip resistant surface around the installation to support access is also important.

Wayfinding and information

A successful wayfinding system should minimise anxiety and confusion, should be easy to understand and allow for everyone to equitably access all information provided. Wayfinding relies on a succession of communication cues provided throughout an environment. Cues may be visual, audible or tactile.

A visual way finding system incorporating cues such as architecture, landscape design, fountains, flagpoles, lighting, landmarks and other orientation points should be developed for the skate park.

Signage is a critical key element of an effective way finding system.

Signs and information about key features including skate elements and spectator areas, as well as the location of car parking, toilets and buildings must be freely available in a range of formats, so that people can prepare to enjoy the skate park they are visiting.

Consideration should be given to 4 types of signs:

- identification
- information
- directional
- safety or regulatory, prohibition and advisory.

It is important to ensure that everyone can effectively interpret and use these different types of signage within the environment. Accessible signage incorporates the positive elements of traditional signage as well as alternatives such as Braille and tactile and audio elements and gives consideration to a number of other key components that impact on accessibility and usability. When designing accessible signage consideration should be given to the following:

- language
- location
- content
- typeface or font
- letter spacing
- size of letters
- appropriate symbols
- tactile and Braille
- contrast and colour
- illumination
- alternatives to traditional signage, for example, audio.

Signage incorporating the international symbol of access or deafness should be used to identify accessible elements where appropriate.

Lighting

Effective, glare free lighting should be provided throughout areas that are likely to be used at night. This can include pathways, skating elements, seating, building entrances and exits as well as areas that may pose a safety risk, such as at pedestrian and vehicle conflict areas, stairs and ramps.

Skating and bike riding areas

Skate and bike riding areas should provide access for all potential users. A range of zones and elements that allow for users of differing ages, interests and abilities will support a broader participation base for the skate park.

Given the various changes of level within skate and bike riding areas, it is important to consider colour and luminance contrasts to differentiate between horizontal and vertical elements and surfaces. Luminance contrast nosings on steps or stairs, colour contrast between vertical and horizontal surfaces such as handrails and skate bowls, ledges on the top of banks, grinding rails and drop offs will all support both an aesthetically pleasing environment for all users, as well as supporting the needs of people with limitations to vision.

The points outlined below should be considered in skating and bike riding areas:

- a continuous accessible path of travel within and around each of the key zones within the skate and bike riding area will assist all users to use each area effectively
- step free transition onto the skate and bike riding area from any location on a path around the perimeter, will ensure options are provided for people to access particular elements that may suit their particular skill levels and interests. It will also support ease of exit in the case of an emergency or accident
- use of smooth, slip resistant ground surfaces that are suitable for use in both wet and dry conditions and have colour and luminance differentiation in these changing conditions is also important
- materials that do not produce glare or retain heat or cold in varying weather conditions should also be considered for all installations including handrails,
- grinding edges, seating and drinking fountains
- the provision of shade over some of the skating elements, as well as over some seating and drinking fountains adjacent to these, will support all users and spectators. Landscape elements can include paths and garden beds, plants, trees and shrubs and interactive components.

Emergency Exit

Emergency exits should be provided along a continuous accessible path of travel to a nominated assembly area from all rooms within a building or pathways within the skate park. Consideration must be given to all users including children, older adults, and people using a range of aids such as prams, wheelchairs, hearing aids, assistance animals and white canes.

Fire extinguishers should be easy to reach for everyone and incorporate clear instructions for use.

Both visible and audible emergency alarms should be installed in buildings and around the site to assist all users as well as a public address system for use by the fire service to assist in directing people along the most accessible path of travel given the building or site condition at any one time.

Emergency exits and paths of travel should be kept clear of obstructions at all times. Equipment and other items stored in buildings should not create any barriers.

Evacuation maps should be installed at accessible heights, be easy to read and available in alternative formats to assist all building and site users.

An emergency evacuation plan that addresses the needs of all building and site users should be developed and practised during evacuation drills.

Checklist of key elements

Consideration must be given to universal design in skate parks relating to a wide range of key elements. In relation to skate parks, the key elements include:

Paths of travel

- [Approaches, onsite roadways and pedestrian crossings](#)
- [Tracks and pathways](#)
- [Ramps](#) and [Stairs](#)
- [Floor and ground surfaces](#)

Car parking, set down and waiting

- [Car parking](#)
- [Set down and waiting areas](#)
- [Vehicle guard rails and wheel stops](#)

Entrances and exits

- [Boom gates and entry control points](#)
- [Fences, gates and bollards](#)
- [Baffles and screens](#)

Building and facilities

- [All buildings](#)
- [Spectator and viewing areas](#)

Toilets, showers and change rooms

- [Toilets - Accessible, ambulant and portable](#)

Communication and information

- [Catering for assistance animals](#)
- [Websites](#)

Installations

- [All installations](#)
- [Barbecues](#)
- [Bicycle storage and racks](#)
- [Drinking fountains](#) and [Litter bins](#)
- [Seating and tables](#)
- [Shade and shelter](#)
- [Landscape design](#)
- [Signage and wayfinding](#)
- [Lighting and contrasts](#)

4.2 Playspaces

This section contains principles that can be interpreted and adapted to suit the outdoor recreation setting of playspaces.

Outdoor and indoor sport and recreation settings vary considerably in their design, size, use and location, from the venue for a chess game, to a football ground.

This setting is described in terms of its role and use, outlining design principles to consider and to support use by everyone. Universal design key requirements and minimum standard access dimensions for specific elements relating to facilities and installations are provided for design that will assist in maximising the effective use of all areas.

The universal design key requirements have been developed as an easy to access checklist of issues to consider and the minimum access dimensions are based on the Australian Standards for Access and Mobility. While these Standards relate to the requirements of people with a range of access challenges and disabilities, they often generally improve access for all people.

Access to playspaces for both children and adults is important. Play provides important motivation for children to become active, engage with others, extend themselves and adapt and learn skills. There are many physical, social, cognitive and emotional benefits that accrue from play.

Many grandparents with access challenges as well as parents or other supervising adults will accompany children to playspaces. Many people will be using mobility aids such as prams and strollers and others may also use wheelchairs, scooters or assistance animals. Good access is important for everyone. Other factors that determine successful playspaces is play value and safety.

Seniors' playgrounds are also becoming more relevant with the ageing of the population and the emergence of the baby boomers who are acutely aware of the need for exercise and outdoor activity.

Passive playspaces as well as play structures for climbing, balancing, hanging, running, swinging, rocking and rolling, should all be considered. Access to and through each element is important and supports both cognitive and social play experiences.

Infrastructure that supports users of playspaces such as direct access to toilets, drinking fountains, seats at various heights, shade and shelter over viewing areas is also important.

Consideration should be given to the size and location of playspaces and the target audience they are intended for when designing the playspaces. This will assist in determining what elements should be included and what structures, installations and access supports should be provided.

Playspaces are often categorised into a hierarchy across areas or local government municipalities. They are then classified according to their position in the hierarchy which takes into account:

- the size and nature of the playground
- the range of attractions it offers
- the function of the playground (and park) in the community
- the level of facilities and amenities provided
- the distance people are likely to travel (catchment)
- the duration of visits
- the need for car parking and toilets, and the capacity of the immediate neighbourhood to absorb visitors.

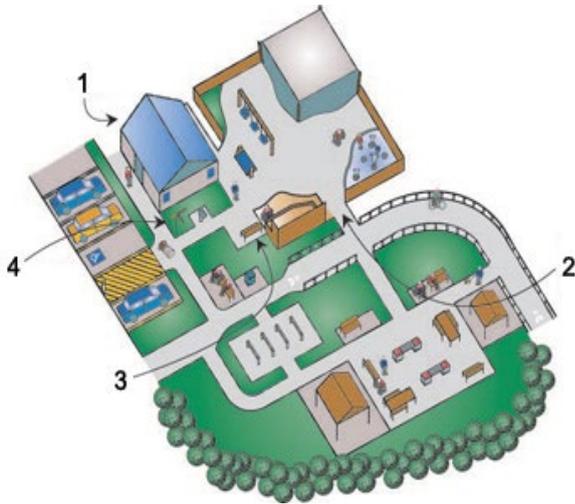
It is important that the level of development is appropriate to the classification, especially for local parks, where over-developed sites may attract visitors from further away and create parking and other problems for local residents.

Similarly, it is important that a district or regional park offers adequate facilities to match the level of that park in the hierarchy.

For the purposes of planning, parks with playspaces are often classified as:

- pocket
- local
- district
- regional.

Figure 39: An example of a playspace setting



- | | | | |
|--|--|---|--|
| <p>1. Access to appropriate toilets for all users including people with mobility challenges, for example ambulant and unisex accessible toilets</p> | <p>2. A continuous accessible path of travel from the site entry to and through any playspace</p> | <p>3. Seating with backs and armrests provided in a variety of configurations and heights that are accessible to adults and children and are located within viewing range of the play components</p> | <p>4. Signage installed within appropriate 'Zones for viewing' in accordance with Australian Standards.</p> |
|--|--|---|--|

Design principles

The following key design principles should be considered when developing or upgrading playspaces.

Connections

All elements within playspaces should be connected via a continuous accessible path of travel, for example, car parking, toilets, buildings, play areas, drinking fountains and seating. These elements should be linked so that anyone can easily move to and through all of them and enjoy the location and the facilities to the maximum extent.

Approach

Playspaces require approach routes for both vehicles and pedestrians. These should be well signed with entry points that users can easily find. Use of environmental or architectural cues, a line of trees leading to the entry or similar structures that identify the entry point can assist.

Parking spaces for vehicles of various size and use, including cars, mini-buses and bicycles should be provided in any onsite car parking area. Consideration should be given to vehicles with side and rear loading capacity for people who may be using mobility aids, as well as enough overhead clearance to load and upload items stored on a vehicle's roof.

Shade and shelter over some parking bays that may be used by people who take a little longer to enter or exit their vehicle are also useful. These bays should be located as close as possible to the entry of the park or garden. The ground surface of the parking area, particularly at designated accessible parking bays, should be level and free from loose material. Use of trees or shrubs that drop foliage or seed pods should be avoided.

An uninterrupted path of travel, free from any hazards or difficult or uneven terrain, should lead users from the car park to the entry point/s of the park or garden.

Drop-off areas that can cater for a variety of vehicles, for example, buses, taxis or cars, should also be provided as close to the principal entry points as possible.

Entry Points

Entry points should be easily identifiable and incorporate effective contrasts to the background area. Points of entry, including site, path, fields of play and building entrances, should be wide enough to cater for the access needs of all users. This includes people using mobility aids such as twin prams, scooters or wheelchairs and, for example, an adult with a child who is walking, but who needs to be held by the hand or a person with an assistance animal. Other users could be people carrying bags, cases and equipment.

Consideration should also be given to the type and weight of any gates or doors that may need to be used, to ensure they are not too heavy or difficult to operate.

Latches that can be used easily with one hand that are located at a low height for ease of use by a smaller person or someone using a wheelchair are important. Entry points that incorporate turnstiles, chicanes, or queuing lines can be difficult for some people to manage and alternatives such as clear doorway entrances should be provided. Appropriate access through security gates, particularly during a temporary festival or event in the park or garden, should also be considered.

Paths

Continuous accessible paths of travel free from obstacles should be provided. They should incorporate alternatives to steps, be firm, stable, slip resistant and avoid excessive slopes and crossfalls whenever possible. Ramps with appropriate gradients, kerbs, handrails and landing and resting points should be provided where slopes cannot be avoided.

Paths should incorporate clear lines of sight at key decision making points, as well as visible and textural indication of any hazards, particularly at any location where there may be a pedestrian or vehicle conflict.

Paths should be wide enough for people to easily pass each other when coming from opposite directions. The width of the pathway should be considered in light of the number of expected users, for example, in areas that attract many people, pathways should be wide enough to allow groups of people to pass each other, including users of a range of mobility aids such as prams, pushers and wheelchairs.

Observation areas

Observation areas that allow parents or carers to observe children using playspaces and play installations are critical. These should be located at various key locations within the playspace.

Observation areas along paths should be designed so that people who stop to observe or supervise users of play installations do not obstruct the path. Spaces should be provided beside, but connected to, the path for effective use by everyone.

A wider section of path or an extended area beside the path, with a firm, level and slip-resistant surface, should be provided.

Consideration should be given to providing seating with backs and armrests at some of these locations with enough room for users of a range of mobility aids to sit off the pathway in the observation area and transfer onto seating if they choose.

The location of these spaces needs to be planned effectively and any vegetation and fences designed accordingly. Fence height and construction are prime considerations.

Observation areas for pedestrians that are installed above ground level, such as lookouts or viewing platforms, should incorporate barrier-free access with kerbs, easy to grip handrails and safety barriers that are effective but don't impede the view, particularly for a smaller person, a child sitting in a stroller or a person sitting in a wheelchair.

Tiered observation areas or lookout towers can be made easier to use by considering the gradient of ramps and the incorporation of easy to grip handrails and the design of stairs, including using contrast nosings on the stair treads. Firm, slip-resistant surface finishes, provision of seating and hooped handrails at the end of seating rows, as well as shade and drinking water at the top, will also assist many people to enjoy the experience.

Provision of easy to use adjustable installations such as telescopes or other viewing devices can also increase the enjoyment of the area.

Landscape design

Landscape elements can include paths and garden beds, plants, trees and shrubs and interactive components such as a maze or labyrinth and play equipment as well as statues, sculptures and water features and a variety of other landscape elements. These are all key components of many playspaces and consideration should be given to location, access, interpretation, usability and safety for everyone.

Limitations to a person's mobility, vision and hearing as well as the interpretation needs of both children and adults should be taken into account in the design and access to these elements.

Key design issues to consider are outlined below:

- the selection and use of trees with foliage that does not overhang paths and drop branches, seed pods, berries or bark, which can create barriers for all users
- use of landscaping design and elements to assist with wayfinding, for example:
- planting of shade trees and plants with different aromas and sounds that can assist users with wayfinding through the area as well as enhance the ambience of the space and create a sense of wellbeing

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- a large sculpture near the entry of a building that can act as a key wayfinding element to assist users to find their way to the entry point
- consistent use of lightly textured paving, across a pathway to identify the direction to a viewing or seating area which assists people with limitations to vision and other people when looking for somewhere to rest
- easy to find and follow paths of travel created by the use of low growing plants along path edges, to features such as statues or water fountains and other key viewing elements
- installation of interesting engagement points such as a maze or labyrinth, to encourage exploration and 'safe' risk taking
- installation of sculptures and structures that can be 'felt' as well as 'seen'
- incorporating interesting seating designs, with backs and armrests, within landscape structures
- effective maintenance of sight lines, particularly in areas where key decision making is required, in isolated locations where personal safety could be compromised, or near any family use areas such as playspaces.

Installations

Installations such as litter bins, seating, lighting, drinking fountains (incorporating a low height dog bowl), dog dropping collection points and other installations must be usable by everyone. These should be located off, but connected to, a continuous accessible path of travel. People should be able to easily approach, reach and use the installation.

All installations should incorporate low height, easy to use controls, that can be reached by a smaller person. They should incorporate adequate leg clearance underneath to accommodate someone who is seated. Consideration of the angles of approach and clear space for a person to move around the installations is also important.

Controls with large push buttons that protrude or extend beyond the surrounding surface, or with large levers are usually easier to use. Avoid any controls that require a person to use fine motor skills like 'one pointed finger' or that require a constant pressure to operate. The ability for one handed operation is preferred. Sensor operated controls that activate by sensing movement underneath or close to the installation also support ease of use.

The use of effective colour and luminance contrast to adjacent and background surfaces, on installations and elements within installations, will make them easier to identify and also assist with understanding how they are used.

Picnic and rest areas

Rest and picnic areas should include seating with backs and armrests, tables with extended ends or clear spaces to allow for a person using a wheelchair to move underneath or to clip on a child restraint.

Barbecues must be useable by everyone with controls at the front of the hot plate. This ensures they are easy to reach and eliminates the need for people to reach over the top of the hot plate.

A level bench top next to the hotplate, made from glare free, heat resistant material, allows a person to move hot pans and other items easily on and off the hot plate, without the need to lift heavy items.

Barbecues should be located off, but connected to, a continuous accessible path of travel, as well as being close to other important facilities such as toilets and playspaces.

Shade and shelter should be provided over some of these areas so that, depending on weather conditions, people can choose what will best suit their needs.

Where picnic and rest areas incorporate structures, such as a rotunda, there should be level or step free access available, as an alternative to stairs.

Toilets and change rooms

If toilets and change rooms are provided, they should be available for use by everyone. In addition to male and female areas, unisex accessible toilets, showers and change rooms are required as these can be effectively used by children as well as adults and carers, including people with a range of access challenges.

Key elements to consider include:

- located on a continuous accessible path of travel from the car parking and pedestrian entry points
- adequate room size and circulation space
- wide door opening, with a sliding door where possible
- easy to see and use door occupied indicator, handle and flushing control
- appropriate grab rails at the side and back of the toilet pan
- appropriate toilet pan distance from the side and rear wall
- toilet paper that is easily reached from the pan
- soap dispenser and hand dryer that are easily reached from the hand basin
- hand basin at an accessible height with appropriate leg clearance underneath
- baby change table where space allows
- adjustable height shower head
- non -slip shower seat with legs for support
- grab rails on walls of shower
- level, slip resistant floor surfaces in both wet and dry conditions
- adult change table with a hoist
- interconnecting change spaces with a lockable door in between
- facilities for both left and right handed users
- provision of ambulant accessible facilities that are useful for people who use mobility aids such as prams and strollers.

Play equipment

Access to play equipment for both children and adults is important. Many grandparents with access challenges as well as parents or other supervising adults will accompany children to and onto playspaces. Many people will be using mobility aids such as prams and strollers and others may also use wheelchairs, scooters or assistance animals. Good access is important for everyone.

Seniors' playgrounds are also becoming more relevant with the ageing of the population and the emergence of the baby boomers who are acutely aware of the need for exercise and outdoor activity.

Passive playspaces as well as play structures for climbing, balancing, hanging, running, swinging, rocking and rolling, should all be considered. Access to and through each element is important and supports both cognitive and social play experiences. Some key elements of playspaces include:

- multi-purpose play activities such as sand diggers, climbing equipment, ball courts, cubbies or swings
- interesting places or surfaces that suggest particular games or encourage activities such as rolling, hiding or running
- vegetation, sand or loose materials that invite building, collecting or creative imaginative play
- elements that provide acceptable risk, changes in surfaces and sensory elements that include tactile, audible and components with scent or smell
- maintenance of clear sightlines to assist with supervising children.

Water

The availability of drinking water for both people and animals is important. Children and adults as well as people using assistance animals will require access to drinking fountains, bowls or other ways of obtaining drinking water. Drinking fountains that are easy to reach, have large lever handles for operation and incorporate a low level drinking bowl for an assistance animal, support access for everyone. A firm slip resistant surface around the installation to support access is also important.

Wayfinding and information

A successful wayfinding system should minimise anxiety and confusion, should be easy to understand and allow for everyone to equitably access all information provided. Wayfinding relies on a succession of communication cues provided throughout an environment. Cues may be visual, audible or tactile.

A visual way finding system incorporating cues such as architecture, landscape design, fountains, flagpoles, lighting, landmarks and other orientation points should be developed for the playspace.

Signage is also a critical key element of an effective way finding system.

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Signs and information about key features including walking trails, places of interest, interactive elements and components of the area, as well as the location of car parking, toilets and buildings must be freely available in a range of formats, so that people can prepare to enjoy the park or garden they are visiting. Consideration should be given to 4 different types of signs:

- identification
- information
- directional
- safety or regulatory, prohibition and advisory.

It is important to ensure that everyone can effectively interpret and use these different types of signage within the environment.

Accessible signage incorporates the positive elements of traditional signage as well as alternatives such as Braille and tactile and audio elements and gives consideration to a number of other key components that impact on accessibility and usability. When designing accessible signage, consideration should be given to the following:

- language
- location
- content
- typeface or font
- letter spacing
- size of letters
- appropriate symbols
- tactile and Braille
- contrast and colour
- illumination
- alternatives to traditional signage, for example, audio.

Signage incorporating the international symbol of access and or deafness should be used to identify accessible elements where appropriate.

In addition, signage at play installations incorporating specific communication symbols, that assist with interpretation and use, as well as tactile and Braille components will support users with a range of access challenges including vision, hearing, and cognitive issues.

Lighting

Effective, glare free lighting should be provided throughout areas that are likely to be used at night.

This can include pathways, seating, building entrances and exits as well as areas that may pose a safety risk, such as at pedestrian and vehicle conflict areas, stairs and ramps.

For design principles and further information read [Good Playspace Guide: "I can play too"](#) (pdf).

Checklist of key elements

Consideration must be given to universal design in skate parks relating to a wide range of key elements. In relation to playspaces, the key elements include:

Paths of travel

- [Approaches, onsite roadways and pedestrian crossings](#)
- [Tracks and pathways](#)
- [Ramps](#)
- [Floor and ground surfaces.](#)

Car parking, set down and waiting

- [Car parking](#)
- [Set down and waiting areas](#)
- [Vehicle guardrails and wheel stops.](#)

Entrances and exits

- [Entrances and doorways](#)
- [Fences, gates and bollards](#)
- [Baffles and screens](#)
- [Keys, keypads and padlocks.](#)

Toilets, showers and change rooms

- [Toilets - Accessible, ambulant and portable](#)
- [Baby change areas](#)
- [Family change areas](#)
- [Drinking fountains.](#)

Installations

- [All installations](#)
- [Barbecues](#)
- [Bicycle storage and racks](#)
- [Drinking fountains](#)
- [Litter bins](#)
- [Seating and tables](#)
- [Shade and shelter](#)
- [Landscape design](#)

- [Signage and wayfinding](#)
- [Lighting and contrasts](#).

Communication and information

- [Catering for assistance animals](#)
- [Websites](#).

4.3 Camping areas

This section contains principles that can be interpreted and adapted to suit the outdoor recreation setting of camping areas.

Outdoor and indoor sport and recreation settings vary considerably in their design, size, use and location, from the venue for a chess game, to a football ground.

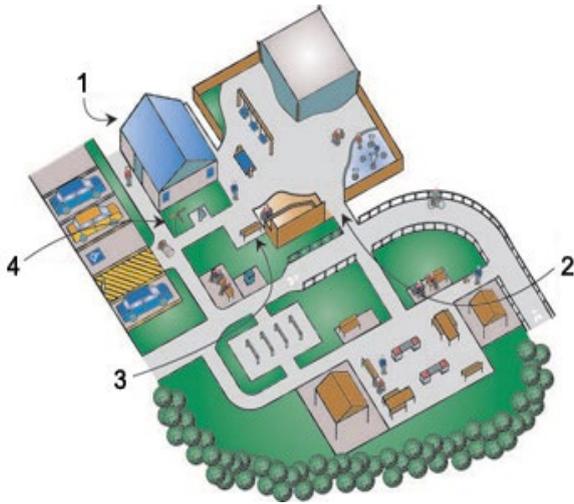
This setting is described in terms of its role and use, outlining design principles to consider and to support use by everyone. Universal design key requirements and minimum standard access dimensions for specific elements relating to facilities and installations are provided for design that will assist in maximising the effective use of all areas.

The universal design key requirements have been developed as an easy to access checklist of issues to consider and the minimum access dimensions are based on the Australian Standards for Access and Mobility. While these Standards relate to the requirements of people with a range of access challenges and disabilities, they often generally improve access for all people.

Camping areas are located in many parts of Australia, from urban areas to state, territory and national parks.

Camping areas can incorporate a variety of sites and facilities. These can include residential camps, holiday resorts, camp grounds, holiday rental accommodation, caravan park cabins and natural bush settings. Camping areas can also be targeted towards different age groups, for example, schools camps for children or caravan parks catering for retirees. Access to all of these areas and the facilities that are provided is important for everyone.

Figure 40: An example of a camping area



1. An appropriate number of accessible cabins should be provided
2. All elements within camping areas should be connected via a continuous accessible path of travel, for example car parking, toilets, buildings, play areas, drinking fountains, seating, power connections etc.

Design principles

The following key design principles should be considered when developing or upgrading camping areas.

Connections

All elements within camping areas should be connected via a continuous accessible path of travel, for example, car parking, toilets, buildings, play areas, drinking fountains, seating and power connections. These should be linked so that anyone can easily move to and through all of these and enjoy the location and the facilities to the maximum extent.

Approach

Camping areas require approach routes for both vehicles and pedestrians. These should be well signed with entry points that users can easily find. Use of environmental or architectural cues, a line of trees leading to the entry or similar structures that identify the entry points can assist.

Parking spaces for vehicles of various size and use, including cars, mini-buses and bicycles should be provided in any onsite car parking area. Consideration should be given to vehicles with side and rear loading capacity for people who may be using mobility aids, as well as enough overhead clearance to load and upload items stored on a vehicle's roof.

Shade and shelter over some parking bays that may be used by people who take a little longer to enter or exit their vehicle are also useful. These bays should be located as close as possible to the entry of the park or garden. The ground surface of the parking area, particularly at designated accessible parking bays, should be level and free from loose material. Use of trees or shrubs that drop foliage or seed pods should be avoided.

An uninterrupted path of travel, free from any hazards or difficult or uneven terrain, should lead users from the car park to the entry point/s of the park or garden.

Drop-off areas that can cater for a variety of vehicles, for example, buses, taxis or cars, should also be provided as close to the principal entry points as possible.

Entry Points

Entry points should be easily identifiable and incorporate effective contrasts to the background area. Points of entry, including site, path, fields of play and building entrances, should be wide enough to cater for the access needs of all users. This includes people using mobility aids such as twin prams, scooters or wheelchairs and, for example, an adult with a child who is walking, but who needs to be held by the hand or a person with an assistance animal. Other users could be people carrying bags, cases and equipment.

Consideration should also be given to the type and weight of any gates or doors that may need to be used, to ensure they are not too heavy or difficult to operate.

Latches that can be used easily with one hand that are located at a low height for ease of use by a smaller person or someone using a wheelchair are important. Entry points that incorporate turnstiles, chicanes, or queuing lines can be difficult for some people to manage and alternatives such as clear doorway entrances should be provided. Appropriate access through security gates, particularly during a temporary festival or event in the park or garden, should also be considered.

Paths

Continuous, accessible paths of travel free from obstacles should be provided. They should incorporate alternatives to steps, be firm, stable and slip resistant and avoid excessive slopes and crossfalls whenever possible. Ramps with appropriate gradients, kerbs, handrails and landing and resting points should be provided where slopes cannot be avoided. Paths should incorporate clear lines of sight at key decision making points, as well as visible and textural indication of any hazards, particularly at any location where there may be a pedestrian and vehicle conflict.

Paths should be wide enough for people to easily pass each other when coming from opposite directions. The width of the pathway should be considered in light of the number of expected users, for example, in areas that attract many people, pathways should be wide enough to allow groups of people to pass each other, including users of a range of mobility aids such as prams, walking frames and wheelchairs.

Landscape design

Landscape elements can include paths and garden beds, plants, trees, shrubs and camp sites as well as statues, sculptures, water features and a variety of other landscape elements. These are all key components of many camping areas.

Consideration should be given to location, access, interpretation, usability and the safety of everyone. Limitations to mobility, vision, hearing and interpretation needs of both children and adults should be taken into account.

Key design issues to consider are outlined below:

- the selection and use of trees with foliage that does not overhang paths and drop branches, seed pods, berries or bark, which can create barriers for all users
- use of landscaping design and elements to assist with wayfinding, for example:

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- planting of shade trees and plants with different aromas and sounds that can assist users with wayfinding through the area as well as enhance the ambience of the space and create a sense of wellbeing
- a large sculpture near the entry of a building that can act as a key wayfinding element to assist users to find their way to the entry point
- consistent use of lightly textured paving, across a pathway to identify the direction to a viewing or seating area which assists people with limitations to vision and other people when looking for somewhere to rest
- easy to find and follow paths of travel created by the use of low growing plants along path edges, to features such as statues or water fountains and other key viewing elements
- installation of interesting engagement points such as a maze or labyrinth, to encourage exploration and 'safe' risk taking
- installation of sculptures and structures that can be 'felt' as well as 'seen'
- incorporating interesting seating designs, with backs and armrests, within landscape structures
- effective maintenance of sight lines, particularly in areas where key decision making is required, in isolated locations where personal safety could be compromised, or near any family use areas such as playspaces.

Installations

Installations such as litter bins, seating, lighting, drinking fountains (incorporating a low height dog bowl), dog dropping collection points and other installations must be usable by everyone. These should be located off, but connected to, a continuous, accessible path of travel. People should be able to easily approach, reach and use the installations.

All installations should incorporate low height, easy to use controls that can be reached by a smaller person. They should incorporate adequate leg clearance underneath to accommodate someone who is seated. Consideration of the angles of approach and clear space for a person to move around the installations is also important.

Controls with large push buttons that protrude or extend beyond the surrounding surface or with levers are usually easier to use. Avoid any controls that require a person to use fine motor skills like 'one pointed finger' or that require a constant pressure to operate. The ability for one handed operation is preferred. Sensor operated controls that activate by sensing movement underneath or close to the installation also support ease of use.

The use of effective colour and luminance contrast to adjacent and background surfaces on installations and elements within installations will make them easier to identify and also assist with understanding how they are used.

Picnic and rest areas

Rest and picnic areas should include seating with backs and armrests, tables with extended ends or clear spaces to allow for a person using a wheelchair to move underneath or to clip on a child restraint.

Barbecues must be useable by everyone with controls at the front of the hot plate. This ensures they are easy to reach and eliminates the need for people to reach over the top of the hot plate.

A level bench top next to the hotplate, made from glare free, heat resistant material, allows a person to move hot pans and other items easily on and off the hot plate, without the need to lift heavy items.

Barbecues should be located off, but connected to, a continuous accessible path of travel, as well as being close to other important facilities such as toilets and playspaces.

Shade and shelter should be provided over some of these areas so that, depending on weather conditions, people can choose what will best suit their needs.

Where picnic and rest areas incorporate structures, such as a rotunda, there should be level or step free access available, as an alternative to stairs.

Companion animal free zones

While it is important for users of service or assistance animals (animals that have been trained to perform tasks that assist people with disabilities) to have equitable access to recreation reserves, consideration should be given to areas where companion animals (pets) are restricted to leads. Older people and young children can become anxious when approached by free running companion animals that may trip or injure them. Some people will also have allergies to animals and will benefit from being able to use areas free from direct contact with companion animals.

Buildings

All buildings should be located on a continuous accessible path of travel from the car parking and pedestrian entry points of the park or garden. They should provide level, step free entry with no revolving doors or turnstiles and with wide door openings to accommodate all users, including people with mobility aids such as prams, strollers, wheelchairs or assistance animals. Self opening doors are preferred, with effective contrasts across any glass doors or areas that could be mistaken for a doorway, to ensure that the safety of users is not compromised.

Consideration should also be given to shelter close to, but not obstructing the principal entries, where some people may wish to store mobility aids while using the building.

Wide internal walkways and doorways, clear of any obstructions on the floor surface and walls, and areas to pass easily are important. Level, slip resistant floor surfaces - in both wet and dry conditions - that do not incorporate any lips or tripping hazards should be maintained.

Access into each room of the building is necessary so that users can participate in all activities and use required facilities. Fixtures and fittings that can be accessed by a smaller person or a child, as well as someone who is seated are necessary, for example, at customer service counters and information and display areas.

Any controls that are required to operate building elements such as lights or doors, should be easy to grip, see, reach and operate, and be supplemented with clear, concise instructions for use where necessary.

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These instructions should be provided in a range of formats, for example, written, audio and tactile to ensure that all users can effectively interpret the information provided.

In multiple level buildings, either ramps with appropriate gradients, or lifts, should be provided to upper levels to support ease of use and movement. These should be easy to locate, with consideration given to the use of effective contrasts as well as raised tactile and Braille signage. Lifts should incorporate buttons that include raised tactile elements as well as Braille close to the buttons to support effective interpretation and wayfinding. Audio announcements should also be installed to identify floor levels.

Any stairs should incorporate effective contrast nosings on the stair treads. Stairs and ramps require easy to grip handrails and tactile ground surface indicators at the top and bottom.

Hearing augmentation should be provided in any buildings where people may meet, for example, to begin a guided walk through the park or garden, or where there are interactive displays that people can listen to. Captions on screens for people who may have limitations to hearing, as well as audio or tactile alternatives for people who may have limitations to vision should also be considered. Good lighting is necessary for all users.

Any buildings that incorporate kitchen or dining areas should provide ease of access for everyone and incorporate a range of tables and seating heights and types for children and adults. Tables with extended ends so a person using a wheelchair can move underneath, lower height or adjustable benches, leg clearances under fixtures such as sinks and benches and access to taps, cupboards and equipment should all be considered.

Toilets and change rooms

If toilets and change rooms are provided, they should be available for use by everyone. In addition to male and female areas, unisex accessible toilets, showers and change rooms are required as these can be effectively used by children as well as adults and carers, including people with a range of access challenges. Key elements to consider include:

- located on a continuous accessible path of travel from the car parking and pedestrian entry points
- adequate room size and circulation space
- wide door opening, with a sliding door where possible
- easy to see and use door occupied indicator, handle and flushing control
- appropriate grab rails at the side and back of the toilet pan
- appropriate toilet pan distance from the side and rear wall
- toilet paper that is easily reached from the pan
- soap dispenser and hand dryer that are easily reached from the hand basin
- hand basin at an accessible height with appropriate leg clearance underneath
- baby change table where space allows
- adjustable height shower head
- non -slip shower seat with legs for support
- grab rails on walls of shower

- level, slip resistant floor surfaces in both wet and dry conditions
- adult change table with a hoist
- interconnecting change spaces with a lockable door in between
- facilities for both left and right handed users
- provide ambulant accessible facilities that are useful for people who use mobility aids such as prams and strollers.

Family change rooms

In addition to male and female and unisex accessible toilets and change facilities, consideration should be given to the installation of some family change rooms to support use by families with several young children.

Key elements to consider include:

- baby change table
- accessible children's toilet
- accessible shower large enough for 2 people, for example, adult and child
- shower seat with legs for support
- adjustable height shower head.

Adult accessible change room

In addition to male, female and unisex accessible toilets and change facilities, consideration should be given to the installation of some private accessible adult change rooms. These will support use by adults with access challenges who may need assistance with changing.

Key elements to consider include:

- accessible shower
- accessible adult change table
- hoist
- accessible hand basin and dryer.

Playspaces

Access to playspaces for both children and adults is important. Play provides important motivation for children to become active, engage with others, extend themselves and adapt and learn skills. There are many physical, social, cognitive and emotional benefits that accrue from play.

Many grandparents with access challenges as well as parents or other supervising adults will accompany children to playspaces. Many people will be using mobility aids such as prams and strollers and others may also use wheelchairs, scooters or assistance animals. Good access is important for everyone.

Passive playspaces as well as play structures for climbing, balancing, hanging, running, swinging, rocking and rolling, should all be considered. Access to and through each element is important and supports both cognitive and social play experiences. Some key elements of playspaces include:

- multipurpose play activities such as sand diggers, climbing equipment, ball courts, cubbies or swings
- interesting places or surfaces that suggest particular games or encourage activities such as rolling, hiding or running
- vegetation, sand or loose materials that invite building, collecting or creative imaginative play
- elements that provide acceptable risk, changes in surfaces and sensory elements that include tactile, audible and components with scent or smell
- maintenance of clear sightlines to assist with supervising children.

Infrastructure that supports users of playspaces such as direct access to toilets, drinking fountains, seats at various heights, shade and shelter over viewing areas is also important.

Consideration should be given to the size and location of the playspace and the target audience that it is intended to service when designing the playspace. This will assist in determining what elements should be included and what structures, installations and access supports should be provided.

Water

The availability of drinking water for both people and animals is important. Children and adults as well as people using assistance animals will require access to drinking fountains, bowls or other ways of obtaining drinking water. Drinking fountains that are easy to reach, have large lever handles for operation, and incorporate a low level drinking bowl for an assistance animal, support access for everyone. A firm slip resistant surface around the installation to support access is also important.

Wayfinding and information

A successful wayfinding system should minimise anxiety and confusion, should be easy to understand and allow for everyone to equitably access all information provided. Wayfinding relies on a succession of communication cues provided throughout an environment. Cues may be visual, audible or tactile.

A visual way finding system incorporating cues such as architecture, landscape design, fountains, flagpoles, lighting, landmarks and other orientation points should be developed for the park or garden.

Signage is also a critical key element of an effective way finding system.

Signs and information about key features including walking trails, places of interest, interactive elements and components of the area, as well as the location of car parking, toilets and buildings must be freely available in a range of formats, so that people can prepare to enjoy the park or garden they are visiting.

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Consideration should be given to 4 different types of signs:

- identification
- information
- directional
- safety or regulatory, prohibition and advisory.

It is important to ensure that everyone can effectively interpret and use these different types of signage within the environment.

Accessible signage incorporates the positive elements of traditional signage as well as alternatives such as Braille and tactile and audio elements and gives consideration to a number of other key components that impact on accessibility and usability. When designing accessible signage, consideration should be given to the following:

- language
- location
- content
- typeface or font
- letter spacing
- size of letters
- appropriate symbols
- tactile and Braille
- contrast and colour
- illumination
- alternatives to traditional signage, for example, audio.

Signage incorporating the international symbol of access and or deafness should be used to identify accessible elements where appropriate.

Lighting

Effective, glare free lighting should be provided throughout areas that are likely to be used at night. This can include pathways, seating, building entrances and exits as well as areas that may pose a safety risk, such as at pedestrian and vehicle conflict areas, stairs and ramps.

Camp sites

Car parking, if provided next to the camp site, should incorporate a firm, level and slip resistant surface with a continuous accessible path of travel to the site, tent and other required facilities, for example, toilets, showers, water, cooking areas and power.

Camping sites should be level and with a solid, stable surface. A firm, grassed area for a tent should be provided next to and flush with the main area of the site.

Sites should be free from overhanging branches or other potentially hazardous elements such as long grass, seed pods, bark or leaf litter or insect mounds. Ideally, camping sites should be protected to some degree from sun, rain and winds and shade or shelter should be provided over some sites.

The edges of the camp site should be well defined with a contrasting texture, colour change or vegetation to assist with boundary identification (if necessary) and wayfinding.

Facilities and furniture

Facilities and furniture provided in camping areas should be located on a continuous accessible path of travel connected to camp sites. These can include toilets, camp buildings, including kitchens and laundries, kiosks, recreation and meeting areas, as well as installations such as post boxes, seats and tables, litter bins, drinking fountains and fire hoses.

Facilities and furniture should be designed so that they are usable by everyone, with consideration given to accessible locations, height, types of controls, entry points and easy to interpret information for operation in a range of formats.

Cabins

Where on-site accommodation such as cabins is provided, these should be designed to consider the needs of everyone including young families, older adults and users with particular access challenges. Level, step free entry points with wide doorways, handles, light switches and other controls that are easy to see, reach and operate, as well as enough circulation space internally for prams and other mobility aids are required.

Consideration should also be given to fixtures and fittings that are easy to reach and use and that provide appropriate clearances and heights for everyone, for example, cupboards and wardrobes as well as taps with lever handles, accessible toilets with multiple seat height options, and showers with level entry and grabrails will assist children as well as adults.

Kitchen benches and sinks with leg clearances underneath for ease of use for someone who may be seated and large grip kitchen utensils and large print remote control units for equipment such as televisions and lamps will assist all users.

Slip resistant floor surfaces that offer suitable traction are important and effective lighting should be provided to cater for a variety of needs.

Emergency exit

Emergency exits should be provided along a continuous accessible path of travel to a nominated assembly area from all rooms within a building or pathways within the site. Consideration must be given to all users including children, older adults and people using a range of aids such as prams, wheelchairs, hearing aids, assistance animals and white canes.

Fire extinguishers should be easy to reach for everyone and incorporate clear instructions for use.

Both visible and audible emergency alarms should be installed in buildings and around the site to assist all users as well as a public address system for use by the fire service to assist in directing people along the most accessible path of travel given the building or site condition at any one time.

Emergency exits and paths of travel should be kept clear of obstructions at all times. Equipment and other items stored in buildings should not create any barriers.

Evacuation maps should be installed at accessible heights, be easy to read and available in alternative formats to assist all building and site users.

An emergency evacuation plan that addresses the needs of all building and site users should be developed and practiced during evacuation drills.

Checklist of key elements

Consideration must be given to universal design in camping areas relating to a wide range of key elements. In relation to camping areas, the key elements include:

Paths of travel

- [Approaches, onsite roadways and pedestrian crossings](#)
- [Tracks and pathways](#)
- [Ramps](#) and [Stairs](#)
- [Floor and ground surfaces](#)

Car parking, set down and waiting

- [Car parking](#)
- [Set down and waiting areas](#)
- [Vehicle guardrails and wheel stops](#)

Entrances and exits

- [Boom gates and entry control points](#)
- [Entrances and doorways](#)
- [Fences, gates and bollards](#)
- [Baffles and screens](#)
- [Keys, keypads and padlocks](#)
- [Emergency Exits](#)

Building and facilities

- [All buildings](#)
- [Customer service areas](#)
- [Hearing augmentation](#)
- [Internal corridors](#)
- [Kitchens](#)
- [Multipurpose rooms](#)
- [Spectator and viewing areas](#)

Toilets, showers and change rooms

- [Toilets - Accessible, ambulant and portable](#)
- [Adult assisted change areas](#)
- [Baby change areas](#)
- [Family change areas](#)
- [Drinking fountains](#)

Aquatic recreation zones

- [Beaches, lakes and rivers](#)
- [Jetties](#)

Installations

- [All installations](#)
- [Barbecues](#)
- [Bicycle storage and racks](#)
- [Drinking fountains](#)
- [Fire extinguishers and alarms](#)
- [Litter bins](#)
- [Seating and tables](#)
- [Shade and shelter](#)
- [Landscape design](#)
- [Signage and wayfinding](#)
- [Lighting and contrasts](#)

Communication and information

- [Catering for assistance animals](#)
- [Websites](#)

Specialist elements

- [Temporary facilities](#)
- [Skate parks](#)

Cabins

The following key requirements and key access dimensions for cabins must be read in conjunction with key requirements and key access dimensions for all buildings and all installations.

General

- A continuous accessible path of travel from the site entry to and through any cabin.
- Clear easy to read signage including large print and tactile number and name at the entrance.
- Wide, level doorways with circulation space provided both sides of the door, which consider angles of approach.
- Consistent and even lighting at the entrance door.
- Shade and shelter over the entrance door.
- Easy access storage areas that support larger items, for example, child's bike and mobility aids.
- Remote controls for heating, cooling, TV and DVD that can be accessed by all people, for example, an adult, child or person sitting.
- Controls on doors, appliances, equipment, fire alarms and extinguishers, lighting, power outlets and other installations that can be reached by a person
 - when standing or seated and used with a closed fist or open palm and incorporating raised tactile and Braille elements.
- Consistent and even lighting (reflected downward - without pooling or providing glare).

Bedroom

- Choices of bed types, for example, single or double.
- Space around the ends and side of the bed for ease of access. Easy to move furniture.
- Adjustable height and easy to move bed with clearance underneath for the legs of a hoist if required.
- Remote controls for appliances, for example, television, DVD, Compact Disc player, air conditioner and lights in an easy to reach location.
- Light switches and television controls that are within easy reach of the bed.
- Television that incorporates closed captioning.
- Telephone with volume control and large print buttons within reach of the bed.
- Wardrobe hanging rails and shelving that are height adjustable.
- Storage area for mobility aids, for example, shopping jeep, baby car seat or wheelchair.
- Windows with easy to use winders that can be accessed from a standing or seated position.

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- Large windows to maximise the view particularly for a person when seated.
- Talking or large print alarm clock.
- Air conditioning or heating that can be adjusted easily and that is not located directly over or next to any bed.

Kitchen

- Clear maneuvering spaces between sink, benches and tables.
- Low height kitchen sink and benches with appropriate clearance around and underneath.
- Automated, cordless appliances, for example, kettle.
- Tea and coffee making facilities that can be accessed from a seated position.
- Appliances, stoves or cook tops that have easy to use controls at the front or side and can be accessed from a standing or seated position
- Appliances with large print instructions and controls.
- Ignition burners on stoves that align with adjoining or neighbouring benches.
- Lever or sensor controls on taps.
- Large, easy grip utensils.
- Drawers or open fronted storage space and shallow shelves with appropriate clearance within and under any pantry or food storage cupboard.

Bathroom

- Accessible toilet and shower (if provided within cabin).

Key access dimensions

- A continuous accessible pedestrian path of travel that is a minimum of 2000 mm high (1980 mm at doorways) and 1000 mm wide to and through the cabin.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Minimum 850 mm clear opening width at doorways and circulation space on both sides of doors that considers angles of approach.
- A minimum space of 2250 mm x 2250 mm (2450 mm x 2450 mm preferred) to maneuver a wheelchair easily around all areas of the rooms.
- A minimum 1600 mm x 2350 mm circulation space (in a 2 walled shower enclosure), 1600 mm x 2500 mm (in a 3-walled enclosure) with appropriate wet areas and fittings
- installed at appropriate heights – note spaces may overlap with toilet circulation space as appropriate.
- Toilets with 1900 mm x 2300 mm to a height of 2000 mm minimum pan circulation space incorporating appropriate fixtures and fitting installation in any accessible toilet.

- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting installed to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for cabins:

- AS 1428.1 – 2009. Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992. Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 4586 – 2004 Slip Resistance Classification of New Pedestrian Surface Materials
- AS 4299 - 1995 Adaptable Housing
- AS 1680 – 2009 Interior Lighting – Safe Movement
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [All buildings](#)
- [All installations](#)
- [Australian Standards](#)
- [Building Sight](#)
- [Camping Association of Australia](#)
- [Universal Design New York 2](#)
- [Australian Hearing](#)
- [Livable Housing Australia](#)
- [Vision Australia](#)
- [Wayfinding Design Guidelines and Wayfinding System Audit](#)
- [VicDeaf.](#)

Camp sites

Consideration must be given to universal design in skate parks relating to a wide range of key elements. In relation to skate parks, the key elements include:

Key requirements

- Continuous accessible path of travel between entry points, camp site and all buildings, facilities and installations.
- Clear, easy to read signage at the entry to the camping area incorporating relevant international symbols of access or deafness, that can easily be read by a person when standing or seated and incorporating raised tactile and Braille elements.

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- Firm, level and slip resistant ground surfaces in both wet and dry conditions at the camp site.
- Power source that is easy to access and has appropriate circulation space, controls and instructions for use.
- Accessible seating and tables located close to the camp site.
- Shade and shelter over the camp site (where possible) and any seating, tables.
- Easy access to drinking water at or close to the camp site.
- Access to appropriate toilets and showers for all users including people with mobility challenges, for example, ambulant and unisex accessible toilets and showers.

Key access dimensions

- A continuous accessible path of travel (that is a minimum 1000 mm wide and 2000 mm high) from the property entrance and car park to and around any camp site, with pathway connections between related facilities, for example, seating, tables, toilets and showers.
- Signage installed within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Power outlet point 600 mm to 1100 mm high that has appropriate circulation space around it to accommodate angles of approach, for example, side on or front on (minimum 800 mm x 1300 mm).
- Seating with backs and armrests (220 mm to 300 mm above the seat) at a height of 350 mm - suitable for children, 450 mm - for general public use and 520 mm - for older adults.

Relevant Australian Standards for camp sites:

- AS 1428.1 – 2009. Design for Access and Mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992. Design for Access and Mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 4586 - 2004. Slip Resistance Classification of New Pedestrian Surface Materials
- AS 1158 - 2010. Lighting for Roads and Public Spaces.

Links to other relevant information

- [All buildings](#)
- [All installations](#)
- [Australian Standards](#)
- [Camping Association of Australia.](#)

Power outlets to camp sites

The following key requirements and key access dimensions for power outlets to camp sites must be considered in addition to those for all installations.

Key requirements

- Coin feed points that are easy to see and reach and alternatives to these where possible.
- Safety switch installed to the power outlet.

Key access dimensions

- 600 mm - 1100 mm high power outlet point.
- Coin feed slots 800 mm – 900 mm high.
- Appropriate reach ranges and controls in accordance with Australian Standards.

Relevant Australian Standards for power outlets to camp sites:

- AS 1428.1 – 2009. Design for Access and Mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992. Design for Access and Mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 1158 - 2010. Lighting for Roads and Public Spaces.

Links to other relevant information

- [All installations](#)
- [Universal Design New York 2](#)
- [Australian Standards](#)

Seating and tables

Seating and tables may be required at a range of locations. Seating in parks and along pathways for example, should incorporate a range of seats with backs and arm rests with various seat heights to supports both children and adults. These seats should also incorporate an adjacent wheelchair space so that people can move off a path of travel and sit with others using the seats.

Accessible seating and wheelchair seating spaces should be integrated with other seating to ensure everyone including family, friends or carers can sit together and enjoy the event.

Seats should incorporate backs and arm rests as well as adjacent wheelchair spaces. Spaces for people using wheelchairs should not be segregated from other people and should not be provided in one location only. A variety of seating options should be available at a number of locations. Clear lines of sight should be maintained from all seating to allow for ease of viewing of the installation or activity that is taking place.

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Picnic tables located on a firm, level and slip resistant ground surface that provide a variety of access points, for example, end or side, are also important.

A continuous accessible path of travel is required to accessible seating and tables.

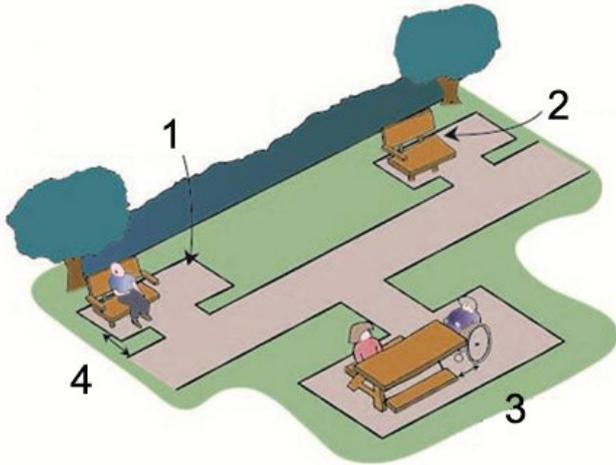
The following key requirements and key access dimensions for seating and tables must be considered in addition to those for all installations.

Key requirements

- Seating and tables that are installed at regular intervals with co-located facilities (for example, rubbish bins and bike racks).
- Various heights of seats suitable for all people including older adults and children which are free of materials that can splinter.
- Seating with backs and armrests of various configuration (for example, one armrest, armrests either ends and central armrest).
- Seating and table materials that do not retain heat or cold.
- Seating and tables that incorporate clear, level circulation space that allows room for the placement of items, for example, a pram to rest, dog to sit or a person using a wheelchair to sit next to a seat.
- Additional 'overflow' seating incorporated into landscaped areas, for example, walls.
- Movable seating provided at reception, restaurant, kiosks, recreation facilities, retail areas and in accessible showers, incorporating backs and armrests.
- Wheelchair seating spaces provided where fixed seating is available.
- A change of texture or ground surface colour at seating and tables to designate the area.
- Tables that have rounded edges and that are free from materials that can splinter.
- Tables incorporating an extended end with adequate space for a person to move in underneath when seated.
- Where fixed seating is installed at tables, space at one end or side of the table for a person to easily move in and underneath, if using a wheelchair.
- Accessible spectator seating and wheelchair spaces at a variety of locations within relevant buildings and facilities, so users can sit with family and friends.

Key access dimensions

Figure 41: Seating and table connected to a pathway



- | | | | |
|---|--|--|---|
| <p>1. Seating that incorporates clear, level circulation space that allows room for the placement of items, for example, pram to rest, dog to sit or a person using wheelchair to sit next to a seat</p> | <p>2. Seating with backs and armrests (220 mm – 300 mm above the seat) for example, at a height of 350 mm – suitable for children, 450 mm – general public use, 520 mm – for older adults</p> | <p>3. Tables incorporating an extended end with adequate space for a person to move in underneath when seated</p> | <p>4. Seating connected to, but back from a path by a minimum of 500 mm.</p> |
|---|--|--|---|

- Seating installed at a minimum of 60 m intervals along pathways.
- Minimum 900 mm between seating and tables that are placed side by side.
- Various heights of seating between 450 mm to 520 mm with backs and armrests (top installed 220 mm -300 mm above seat) - 450 mm for adults and 520 mm for older adults. If children are expected to be a primary user, a seat height of 350 mm will assist.
- Landscaped seating at least 300 mm wide with an overhang of 100 mm to allow a person to place their heels on the ground when getting up from the seat.
- Fixed wheelchair seating spaces provided and located within a facility that meet the size and ratio of the space served in accordance with Australian Standards.
- A minimum circulation space of 1500 mm around a table to allow a person to maneuver easily.
- Minimum depth of 620 mm under a table for a person using a wheelchair and if 2 spaces are located opposite on the same table, the table needs to be at least 1240 mm deep with a height under the table a minimum of 800 mm.

Relevant Australian Standards for seating and tables

- AS 1428.1 – 2009 Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities.

Links to other relevant information

- [All installations](#)
- [Spectator and viewing areas](#)
- [Access awareness handbooks](#)
- [Australian Standards](#)
- [Universal Design New York 2](#)

Shade and shelter

The following key requirements and key access dimensions for shade and shelter must be considered in addition to those for all installations.

Key requirements

Shade and shelter, both above and around (vertical and horizontal), to protect all users from extremes of weather at the following external installations:

- accessible car parking
- ball courts
- barbecues
- bicycle storage and racks
- camp sites
- entrances to buildings and facilities
- notice boards
- outdoor seating
- pathways leading to customer service areas
- playspaces
- spectator seating
- swimming pools and spas
- transport set down and waiting areas
- vending machines.
- Use the natural environment where possible, for example, bushes, large stable rocks, shrubs that do not drop excessive debris.

- Pathways that extend beyond the areas of shade ensure the flow of pedestrian traffic is not interrupted.
- Maintain a clear path of travel through any shelter or infrastructure.
- Shade and shelter points to be connected to paths of travel to provide appropriate access.
- Shade and shelter points to consider the size and space requirements of all users, for example, parents with prams, a person with an assistance animal or using a wheelchair.

Key access dimensions

- A minimum 2000 mm overhead clearance on any path of travel where shade or shelter is provided.

Relevant Australian Standards for shade and shelter

- AS 1428.1 – 2009. Design for access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992. Design for access and mobility - Enhanced and Additional Requirements - Buildings and Facilities.

Links to other relevant information

- [All installations](#)
- [Access awareness handbooks](#)
- [Good Playspace Guide: "I can play too" \(pdf, 1.42 MB\)](#)
- [Universal Design New York 2](#)

Landscape design

The following key requirements and key access dimensions for landscape design must be considered in addition to those for all installations particularly as they relate to landscape installations, for example, sculptures, arbours, water features or other structures.

Key requirements

- Signage indicating key landscaping elements that are available for people to experience, for example, sculptures, arbours and garden beds.
- A continuous accessible path of travel from any car park, public transport and taxi set down area and property boundary through any landscaping elements along pathways.
- Entrances and pathways that are free from plant and tree droppings, leaves, seed pods, bark or any plants that attract insects or have prickles and thorns.
- Garden beds with raised sections to support access for all users, whether they're standing or seated.

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- Landscaping elements that do not drop excessive debris to be used to shade key elements in outdoor areas, for example, playspaces and seating.
- Landscaping elements along pathways and around elements that do not encroach into lines of sight for users of the area, for example, children, an older adult, or a person who is deaf.
- Landscaping elements incorporating an effective contrast between vertical and horizontal surfaces and background and adjacent surfaces, for example, raised garden beds and plant surrounds.
- Adequate overhead and side clearance along pathways ensuring no landscape elements or installations encroach, for example, on sculptures, arbours, garden and water fountains.
- Landscaping elements and installations that consider and assist with way finding, for example, colour and scent cues, structures at entry and exit points, and defined pathway edgings.
- Change of ground surface colour or material to assist people to identify key elements in landscaped areas, for example, seating, shelter and barbecues.

Key access dimensions

Figure 42: Raised garden bed



1. Appropriate reach ranges and controls in accordance with Australian Standards
2. Raised garden beds that are between 750 mm to 850 mm high with leg clearance underneath that is a minimum of 600 mm high and 750 mm deep.

- A continuous accessible path of travel that is a minimum of 2000 mm high and 1000 mm wide for an ambulant person, 1200 mm wide for a person using a wheelchair, 1500 mm wide for 2 people to pass each other easily and 1800 mm wide for a person using a wheelchair to turn 180 degrees.
- Signage and operating instructions at landscape installations within appropriate 'Zones for Viewing' in accordance with Australian Standards.
- Circulation around any landscape installations that allows for a person to approach from a variety of angles (minimum 800 mm x 1300 mm).
- Landscape installations connected to, but setback a minimum of 500 mm from any pathway.
- Minimum 30% luminance contrast between landscape installations and background and adjacent surfaces.

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- Maximum height at the top of hedges or similar fences 1050 mm above ground level.
- Raised garden beds that are between 750 mm to 850 mm high with leg clearance underneath a minimum of 600 mm high and 750 mm deep.
- Appropriate reach ranges and controls in accordance with Australian Standards.
- Lighting over any landscape installations to required lux levels in accordance with the range in Australian Standards.

Relevant Australian Standards for seating and tables

- AS 1428.1 – 2009 Design for Access and mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for Access and mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS/NZS 4586 - 2004 Slip Resistance Classification of New Pedestrian Surface Materials.

Links to other relevant information

- [All installations](#)
- [Access awareness handbooks](#)
- [Building Sight](#)
- [Sightline](#)
- [Universal Design New York 2](#)
- [Wayfinding Design Guidelines and Wayfinding System Audit.](#)

Signage and wayfinding

Key requirements

Consideration should be given to the 4 main criteria in wayfinding design as follows:

- architectural cues
- graphic communication
- audible communication
- tactile communication.

Consideration should also be given to provision of the 4 main categories of graphic wayfinding elements including:

- identification
- reinforcement
- orientation
- destination.

General access requirements for all signage

- Work within a hierarchy of signage to maximise impact and usability as follows:
- identification - property, building number, name visible from the roadside, distance of travel
- information - opening hours, facilities available, for example, toilets, picnic areas; located directly inside site or building entrance
- direction - text and arrows directing users to facilities, for example, at directional decision points, car parking, set down and waiting areas
- emergency and safety signs - at various locations including emergency exits.
- Appropriate print size on all signs suitable for expected viewing distances.
- A range of alternatives to printed signage only, for example, audio, raised tactile and Braille.

General access requirements for static signage

- Appropriately located at entry to and along continuous accessible paths of travel.
- Clearly visible to people when standing or seated.
- Consistent graphic style and layout throughout a site or building.
- Appropriate use of international symbols of access or deafness.
- Concise and unambiguous content.
- Use of common terms, names and colours rather than obscure, technical names, for example, orange, blue, brown rather than ochre, turquoise or beige.
- Use of appropriate inclusive language, 'accessible' entry or ramp in preference to 'disabled' entry or ramp.
- Factual and specific information about degrees of difficulty of pathways in outdoor spaces such as parks, suitable for tourists, experienced hikers, assisted wheelchair users and independent wheelchair users.
- Capital and lower case letters (Sentence case).
- Use of Sans Serif font, Arial or Helvetica fonts.
- Effective contrast between sign and sign background and adjacent surfaces.
- Raised tactile and Braille elements on facility identification and direction signs, toilets.
- Back-lit without glare.
- Low reflectivity (avoid glass and acrylic materials).
- Consistent and even lighting (reflected downward - without pooling or providing glare) over key elements within the space.
- Well maintained and free from any overhanging obstructions and graffiti.

General access requirements for screen and scrolling signage

- Minimum 6 second static to allow for reading of sign.
- Audio alternatives to screen or scrolling signs.

General access requirements for maps

- Maps of any site or building at the entrance and at key directional points.* Maps that read in the direction that the user is facing, including information to assist users with their current location, 'you are here' and identifying fixtures or landmarks to assist with wayfinding, for example, water fountain, sculpture and/or arbour.
- Continuity of language in informational maps and signage, that is, for example, information map states 'pavilion', sign at building states 'pavilion'.

General access requirements for tactile signs and maps

- Tactile signs and maps at key points within a building or site.
- Tactile signs or maps at the main entry to a venue.
- Tactile information that includes general orientation cues, access and exit points, changes in direction and key facilities.

General access requirements for display and exhibition signage

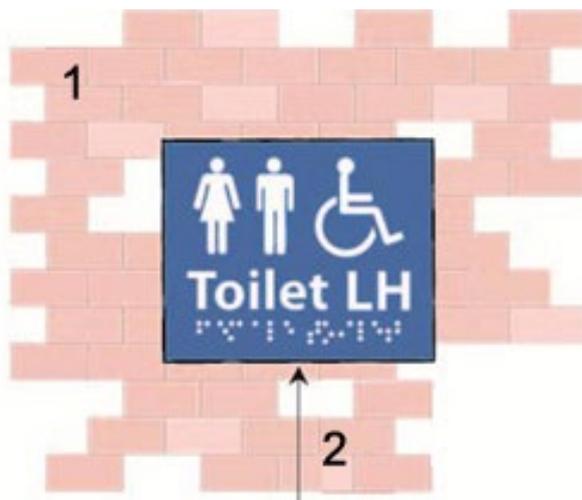
- Descriptive labelling on exhibits in Sans Serif font type and appropriate size.
- Appropriate lighting.
- Appropriate contrast to background and adjacent surfaces.
- Use of non-reflective signage materials.
- Audio programs as alternatives to signage on displays or exhibits.

General access requirements for tactile ground surface indicators

- Hazard tactile ground surface indicators used to assist with wayfinding installed at the top and bottom of steps, stairs and ramps, along jetties, raised platforms etc and other areas where there is an overhead obstruction encroaching on to a pathway, underneath a stair cleft, and at changes in direction on pathways.
- Directional tactile ground surface indicators used to assist with wayfinding by providing direction to installations such at road crossing points, seating and public transport stops.
- Appropriate luminance contrast between tactile ground surface indicators and background and adjacent surfaces.

Key access dimensions

Figure 43: Braille and tactile signage for toilet facilities



1. Appropriate reach ranges and controls in accordance with Australian Standards
2. Raised garden beds that are between 750 mm to 850 mm high with leg clearance underneath that is a minimum of 600 mm high and 750 mm deep

- Letters 17.5 mm high for each metre of viewing distance.
- Minimum 30% luminance contrast between sign and sign background - white on black, yellow on black and white on ultramarine blue to Australian Standards is recommended.
- If signage can be obscured, installation of duplicate signage located above 2000 mm.
- Sans serif type font, Arial or Helvetica type font.
- Signage located within the common 'Zones for Viewing' in accordance with Australian Standards.
- Tactile and Braille signage installed to identify an accessible entry of a building at any non-accessible entry, an accessible toilet and the type of toilet provided, left hand use or right hand use, an ambulant toilet, hearing augmentation type and space covered and the location of receivers if in use, and lifts.
- Tactile ground surface indicators set back 300 mm \pm 10 mm from any hazard (600 mm to 800 mm deep), extending across the width of a path adjoining the hazard, and with a minimum of 30% luminance contrast to the surrounding ground surface and background. (Dimensions for tactile ground surface indicators, both hazard and directional, at specific locations and required luminance contrasts in accordance with Australian Standards).
- Raised tactile and Braille signs mounted at a height of 1200 mm to 1600 mm above the ground or floor surface.
- Appropriate international symbol of access as required.

Relevant Australian Standards for seating and tables

- AS/NZS 2890.6 - 2009 Parking Facilities - Off-street Parking for People with Disabilities

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- AS 1428.1 – 2009 Design for Access and Mobility - General Requirements for Access - New Building Work
- AS 1428.2 - 1992 Design for Access and Mobility - Enhanced and Additional Requirements - Buildings and Facilities
- AS 1428.3 – 1992 Obsolescent June 2012 Design for Access and Mobility - Requirements for Children and Adolescents with Physical Disabilities
- AS/NZS 1428.4:1 - 2009 Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
- AS 1428.5 Design for Access and Mobility - Communication for People who are Deaf or Hearing Impaired
- AS/NZS 4586 - 2004 Slip Resistance Classification of New Pedestrian Surface Materials
- AS 1158 - 2010 Lighting for Roads and Public Spaces
- AS 1680 - 2009 Interior Lighting - Safe Movement
- AS 1735 Lifts, Escalators and Moving Walks
- AS 1670.4 - 2004 Fire Detection System Design, installation and commissioning - Sound Systems and Intercom Systems for Emergency Purposes
- AS 2293.1 - 2005 Emergency Escape Lighting and Exit Signs for Buildings - System Design, Installation and Operation
- AS 4428.4 - 2004 Fire Detection, Warning, Control and Intercom Systems - Control and Indicating Equipment - Intercommunication Systems for Emergency Purposes
- AS 1744:1975 Standard Alphabets for Road Signs - metric units
- AS 2700 -1996 Colour Standards for general purposes
- AS 1742.5 - 1997 Street Name and Community Facility Name Signs
- AS 2156.1 - 2001 Walking Tracks - Classification and signage
- ISO 7001:2007 Graphical Symbols - Public information symbols
- Disability (Access to Premises - Buildings) Standards 2010.

Links to other relevant information

- [All installations](#)
- [All buildings](#)
- [Access awareness handbooks](#)
- [Building Sight](#)
- [Wayfinding Design Guidelines and Wayfinding System Audit](#)
- [Australian Hearing](#)
- [Universal Design New York 2](#)
- [Vision Australia](#)
- [The Good The Bad and The Ugly](#)

4.4 Aquatic leisure centres

This section contains principles that can be interpreted and adapted to suit the indoor recreation setting of aquatic leisure centres.

Outdoor and indoor sport and recreation settings vary considerably in their design, size, use and location, from the venue for a chess game, to a football ground.

This setting is described in terms of its role and use, outlining design principles to consider and to support use by everyone. Universal design key requirements and minimum standard access dimensions for specific elements relating to facilities and installations are provided for design that will assist in maximising the effective use of all areas.

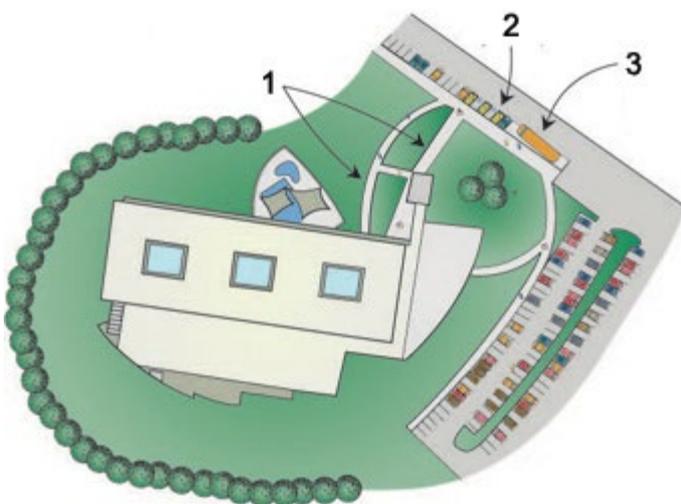
The universal design key requirements have been developed as an easy to access checklist of issues to consider and the minimum access dimensions are based on the Australian Standards for Access and Mobility. While these Standards relate to the requirements of people with a range of access challenges and disabilities, they often generally improve access for all people.

Aquatic leisure centres often incorporate facilities for a wide range of activities and include both wet and dry areas. Common elements include swimming pools for a variety of ages and abilities, spas, saunas and water play areas as well as multipurpose rooms for other activities such as exercise classes, child care and gymnasiums.

Some aquatic leisure centres are used for competitions such as swimming, diving and water polo, while others are used solely for non-competitive community recreational purposes.

Used by a wide variety of people, aquatic leisure centres are particularly important for children learning to swim and older adults who wish to participate in gentle water exercises to maintain a healthy lifestyle. They are also often a centre of choice for people with access challenges, as water provides opportunities for exercise and enjoyment by everyone.

Figure 44: An example of an aquatic leisure centre setting



1. Continuous accessible paths of travel free from obstacles should be provided
2. Appropriate numbers of accessible parking bays to be provided
3. Drop off areas that can cater for a variety of vehicles, for example, bus, taxi or car, should be provided as close as possible to principal entry points

Design Principles

The following key design principles should be considered when developing or upgrading aquatic leisure centres.

Connections

All elements within aquatic leisure centres should be connected via a continuous, accessible path of travel, for example, car parking, toilets, buildings, playspaces, drinking fountains, seating, swimming pools and other water activities. These elements should be linked so that anyone can easily move to and through all of them and participate in the activities and facilities provided.

Approach

Aquatic leisure centres require approach routes for both vehicles and pedestrians. These should be well signed with entry points that users can find easily. Use of environmental or architectural cues, a line of trees leading to the entry or similar structures that identify the entry points can assist.

Parking spaces for vehicles of various size and use, including cars, minibuses and bicycles, should be provided in any onsite car parking area. Consideration should be given to vehicles with side and rear loading capacity for people who may be using mobility aids, as well as enough overhead clearance to load and upload items stored on a vehicle's roof.

Shade and shelter over some parking bays that may be used by people who take a little longer to enter or exit their vehicle are also useful. These bays should be located as close as possible to the principal entry points of the facilities provided. The ground surface of the parking area, particularly at designated accessible parking bays, should be level and free from loose material. Use of trees or shrubs that drop foliage or seed pods should be avoided.

An uninterrupted path of travel, free from any hazards or difficult or uneven terrain, should lead users from the car park to the entry points of the facilities.

Drop-off areas that can cater for a variety of vehicles, for example, buses, taxis or cars, should also be provided as close as possible to principal entry points.

Entry points

Entry points should be easily identifiable and incorporate effective contrasts to the background area. Points of entry, including site, paths, fields of play and building entrances, should be wide enough to cater for the access needs of all users. This includes people who may be using mobility aids such as twin prams, scooters or wheelchairs and, for example, an adult with a child who is walking but who needs to be held by the hand, or a person with an assistance animal. Other users might be people carrying bags, cases and equipment.

Consideration should also be given to the type and weight of any gates or doors that may need to be used to ensure they are not too heavy or difficult to operate.

Latches that can be used easily with one hand that are located at a low height for ease of use by a smaller person or someone using a wheelchair are important.

Entry points that incorporate turnstiles, chicanes or queuing lines can be difficult for some people to manage and alternatives should be provided. Appropriate access through security gates, particularly during an event, should also be considered.

Concourse areas

Continuous, accessible paths of travel or concourse areas free from obstacles should be provided. They should incorporate alternatives to steps, be firm, stable and slip resistant and avoid excessive slopes and crossfalls whenever possible. Ramps with appropriate gradients, kerbs, handrails and landing and resting points should be provided where slopes cannot be avoided. Concourse areas should incorporate clear lines of sight at key decision making points, as well as visible and textural indication of any hazards, particularly at any location where there may be a pedestrian and vehicle conflict.

Concourse areas should be wide enough for people to easily pass each other when coming from opposite directions. The width of the concourse should be considered in light of the number of expected users, for example, in areas that attract many people, pathways should be wide enough to allow groups of people to pass each other, including users of a range of mobility aids such as prams, walking frames and wheelchairs.

All concourse areas should incorporate a non-slip surface, which is particularly important in wet areas of the centre.

Spectator areas

Spectator areas for everyone should be provided at various locations in the centre where activities are held. Consideration should be given to locations that will cater for users of mobility aids such as prams, strollers, wheelchairs, scooters and assistance animals so people can sit with family and friends.

All spectator seating and viewing areas must have clear lines of sight to the swimming pools, scoreboards and television monitors (wherever provided). Scoreboards should be easy to see and read from a long distance and incorporate audible alternatives.

Alternative scoring systems that assist people with hearing and vision limitations should also be provided. If a sound amplification system is provided, assistive hearing devices should also be installed to assist spectators with a hearing impairment. Assistance hearing devices can be used with or instead of hearing devices.

Any spectator areas along concourse areas should be designed so that people do not obstruct the path when stopping to view the activity. Spaces should be provided beside, but connected to, the path for effective use by everyone. A wider section of path or an extended area beside the path with a firm, level and slip-resistant surface should be available.

Consideration should be given to installing seating with backs and armrests at some of these locations with enough room for users of a range of mobility aids to sit off the pathway with other people.

Spectator areas that are installed above ground level, such as viewing platforms, should incorporate barrier-free access with kerbs, easy to grip handrails and safety barriers that are effective but don't impede the view, particularly for a smaller person, a child sitting in a stroller or a person sitting in a wheelchair.

Tiered spectator areas or scoring towers can be made easier to use by considering the gradient of ramps and the incorporation of easy to grip handrails and the design of stairs, including using contrast nosings on the stair treads. Firm, slip-resistant surface finishes, provision of seating and hooped handrails at the end of seating rows, as well as shade and drinking water at the top, will also assist many people to enjoy the experience.

Seating spaces should also be deep and wide enough to enable a person to feel safe from falling if in a tiered spectator area.

Lifts should be provided in structures that are designed for spectators to view activities from levels above the ground.

Scoring and administration

Consideration should be given to the provision of accessible scoring and administration areas. This includes offices, score benches, viewing areas for scorers, scoreboards and audio announcements.

Scoreboards should be easy to see and read from a long distance and incorporate alternative scoring systems that assist people with hearing and vision challenges. If a sound amplification system is provided, hearing devices should also be installed to assist spectators with hearing impairment.

If separate areas are provided for officials, accessible facilities should be included, such as a unisex accessible toilet and shower available for use by males and females.

Landscape design

Landscape elements in outdoor spaces at aquatic leisure centres may include paths and garden beds, plants, trees and shrubs, as well as statues, sculptures, water features and a variety of other landscape elements. Consideration should be given to location, access, interpretation, usability and safety for everyone. Limitations to a person's mobility, vision and hearing as well as the interpretation needs of both children and adults should be taken into account in the design and access to these elements.

Key design issues to consider are outlined below:

- the selection and use of trees with foliage that does not overhang paths and drop branches, seed pods, berries or bark, which can create barriers for all users
- use of landscaping design and elements to assist with wayfinding. For example:
- planting of shade trees and plants with different aromas and sounds that can assist users with wayfinding from the car park to the centre entry, as well as enhance the ambience of the space and create a sense of wellbeing
- a large sculpture near the entry of a building that can act as a key wayfinding element to assist users to find their way to the entry point
- consistent use of lightly textured paving, across a pathway to identify the direction to a viewing or seating area which assists people with limitations to vision and other people when looking for somewhere to rest
- easy to find and follow paths of travel created by use of low growing plants along path edges, to features such as spectator areas, seating water features or other key elements

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- installation of sculptures and structures that can be 'felt' as well as 'seen'
- incorporating interesting seating designs, with backs and armrests, within landscape structures
- effective maintenance of sight lines, particularly in spectator areas, at key decision making points, isolated locations where personal safety could be compromised or any family use areas such as playspaces and swimming pools.

Installations

Installations such as litter bins, seating, lighting, drinking fountains (incorporating a low height dog bowl), dog dropping collection points and other installations must be usable by everyone. These should be located off, but connected to, a continuous, accessible path of travel. People should be able to easily approach, reach and use the installations.

All installations should incorporate low height, easy to use controls that can be reached by a smaller person. They should incorporate adequate leg clearance underneath to accommodate someone who is seated. Consideration of the angles of approach and clear space for a person to move around the installations is also important.

Controls with large push buttons that protrude or extend beyond the surrounding surface or large levers are usually easier to use. Avoid any controls that require a person to use fine motor skills like 'one pointed finger' or that require a constant pressure to operate. The ability for one handed operation is preferred. Sensor operated controls that activate by sensing movement underneath or close to the installation also support ease of use.

The use of effective colour and luminance contrast to adjacent and background surfaces on installations and elements within installations will make them easier to identify and also assist with understanding how they are used.

Buildings

All buildings should be located on a continuous, accessible path of travel from the car parking and pedestrian entry points of the aquatic leisure centre. They should provide level, step-free entry with no revolving doors or turnstiles and with wide door openings to accommodate all users, including people with mobility aids such as prams, strollers, wheelchairs or assistance animals. Self-opening doors are preferred, with effective contrasts across any glass doors or areas that could be mistaken for a doorway to ensure that the safety of users is not compromised.

Consideration should also be given to shelter close to, but not obstructing, the principal entries where some people may wish to store mobility aids while using the building.

Wide internal walkways and doorways, clear of any obstructions on the floor surface and walls, and areas to pass easily are important. Level, slip-resistant floor surfaces in both wet and dry conditions that do not incorporate any lips or tripping hazards should be maintained.

Access into each room of the building is necessary so that users can participate in all activities and use required facilities. Fixtures and fittings that can be accessed by a smaller person or a child, as well as someone who is seated, are necessary, for example, at customer service counters and information and display areas.

Adequate and accessible storage areas for equipment should be considered to meet the needs of facility users. Separate storage areas may be required where fuel operated equipment or chemicals are to be stored.

Any controls that are required to operate building elements, such as lights or doors, should be easy to grip, see, reach and operate and be supplemented with clear, concise instructions for use where necessary. These instructions should be provided in a range of formats, for example, written, audio and tactile, to ensure that all users can effectively interpret the information provided.

In multiple level buildings, either ramps with appropriate gradients or lifts should be provided to upper levels to support ease of use and movement. These should be easy to locate, with consideration given to the use of effective contrasts as well as raised tactile and Braille signage. Lifts should incorporate buttons that include raised tactile elements as well as Braille close to the buttons to support effective interpretation and wayfinding. Audio announcements should also be installed to identify floor levels.

Any stairs should incorporate effective contrast nosings on the stair treads. Stairs and ramps require easy to grip handrails and tactile ground surface indicators at the top and bottom.

Multipurpose rooms

Access into multipurpose rooms is necessary as well as access to any equipment or furniture and access through to activity areas including stages and podiums. Where possible, remote control units should be provided on any equipment or fixtures such as blinds, shutters or presentation equipment where operational access may be difficult.

Hearing augmentation should be provided in any multipurpose rooms where there is an in-built amplification system installed, for example, in areas where meetings or activities are held, such as exercise classes or gymnasiums, as well as around pool areas where announcements are provided to users or activation alarms are installed for the commencement of water or floor movement sequences, for example, wave pools, hydrotherapy pools or other interactive water play elements.

Captions on screens for people who may have limitations to hearing, as well as audio or tactile alternatives for people who may have limitations to vision, should also be considered. Good lighting is necessary for all users.

Retail outlets

Retail outlets provide an important income stream for aquatic leisure centres and are an important place to meet for users. Access to these spaces should be considered so that they can be used at all times when any area of the centre is open to the public. A continuous, accessible path of travel from the car park and all entry points, as well as identification within an effective wayfinding system, are critical.

Clear, clutter-free entry points, a low height customer service counter with adequate leg clearance underneath, a bell to attract the attention of sales staff and a clear area for interacting with staff are important.

Wide aisles with adequate room for people to easily pass each other, as well as room to move around easily for a person using a mobility aid such as a pram, wheelchair or assistance animal, are also essential.

Effective signage, large print price tags and name tags on staff support all users.

Consideration should also be given to the installation of hearing augmentation at any screened customer service counters and background noise such as radios and music kept to a minimum.

Kitchen, canteen or dining

Kitchen, canteen and dining areas should provide ease of access for everyone and incorporate a range of tables and seating heights and types for children and adults. There is a range of kitchens that may exist in an aquatic leisure facility, for example, for staff or commercial use.

Tables with extended ends so a person using a wheelchair can move underneath, lower height or adjustable benches, leg clearances under fixtures such as sinks and benches and access to taps, cupboards and equipment should all be considered.

Low height sections at bars and canteen counters, with adequate leg clearance underneath, assist a smaller person or someone using a wheelchair to reach the counter and interact effectively with people who are serving food and drinks. This also provides the opportunity for customers to easily view items on offer and make informed decisions about selections. Large print information regarding items for sale and prices (where relevant) assist everyone.

Hearing augmentation and signage indicating this is available should also be installed at any screened counter area to support people who may have a hearing impairment. Unnecessary background noise such as radios or music should also be avoided.

Toilets and change rooms

Toilets and change rooms should be available for use by everyone. In addition to male and female areas, unisex accessible toilets, showers and change rooms are required as these can be effectively used by children as well as adults, including people with a range of access challenges.

Key elements to consider include:

- located on a continuous accessible path of travel from the car parking and pedestrian entry
- adequate room size and circulation space
- wide door opening, with a sliding door where possible
- easy to see and use door occupied indicator, handle and flushing control
- appropriate grab rails at the side and back of the toilet pan
- appropriate toilet pan distance from the side and rear wall
- toilet paper that is easily reached from the pan
- soap dispenser and hand dryer that are easily reached from the hand basin
- hand basin at an accessible height with appropriate leg clearance underneath
- baby change table where space allows

- adjustable height shower head
- non-slip shower seat with legs for support
- grab rails on walls of shower
- level, slip resistant floor surfaces in both wet and dry conditions
- adult change table with a hoist
- interconnecting change spaces with a lockable door in between
- facilities for both left and right handed users
- provision of ambulant accessible facilities which are useful for people who use mobility aids such as prams and strollers.
- Read more about toilets and change rooms.

Family change rooms

In addition to male and female and unisex accessible toilets and change facilities, consideration should be given to the installation of some family change rooms to support use by families with several young children. Key elements to consider include:

- baby change table
- accessible children's toilet
- accessible shower large enough for 2 people, for example, adult and child
- seat with legs for support
- adjustable height shower head.

Adult accessible change room

In addition to male, female and unisex accessible toilets and change facilities, consideration should be given to the installation of some private, accessible adult change rooms. These will support use by adults with access challenges who may need assistance with changing and accessing a swimming pool. Key elements to consider include:

- pool deck location to support ease of access, via a tracking hoist in the change room to or from the pool
- accessible toilet
- accessible shower
- accessible adult change table
- accessible hand basin and dryer.

Child care

Child care areas should cater for both children and adults. Level access and alternative access through high, childproof gates should be provided. Consideration should be given to furniture and installations and accessible toilet and change facilities for both ambulant children and children with access challenges.

Playspaces within child care areas should cater for all users and incorporate a range of play elements that support the inclusion of children with varying abilities.

Playspaces

Both wet and dry playspaces for children are often provided in aquatic leisure centres. Play provides important motivation for children to become active, engage with others, extend themselves and adapt and learn skills. There are many physical, social, cognitive and emotional benefits that accrue from play.

Many people will be using mobility aids such as prams and strollers and others may also use wheelchairs, scooters or assistance animals.

Many grandparents will accompany children to activities in aquatic leisure centres. Good access is important for everyone.

Passive playspaces as well as play structures for water play, balancing, sliding, wave riding, rocking and rolling can all be considered. Access to and through each element is important and supports both cognitive and social play experiences.

Some key elements of play areas include:

- multipurpose play activities such as sand diggers, climbing equipment, ball courts, cubbies or swings
- Interesting places or surfaces that suggest particular games or encourage activities such as rolling, hiding or running
- vegetation, sand or loose materials that invite building, collecting or creative imaginative play
- elements that provide acceptable risk, changes in surfaces and sensory elements that include tactile, audible and olfactory components
- water play including sprays, bubblers, fountains, slides and other interactive water components
- maintenance of clear sightlines to assist with supervising children.
- Infrastructure that supports users such as direct access to toilets, drinking fountains, seats at various heights and shade and shelter over viewing areas is also important.

Swimming pools

Access into all pools via a range of alternatives – including level or beach entry or ramp entry – is essential. Installation of a hoist for access to the pool is useful for some users, however, this can attract attention, compromise people's dignity and reduce independence. If a hoist or sling is to be provided as a means of pool entry, it should be designed to minimise the amount of time a person is on 'display' when in use. It could be incorporated into a change facility on the pool deck that allows direct access via a tracking hoist into the pool.

Handrails should be provided at all pool entry points and contrast nosings installed on any stair treads. Colour definition of the pool entry point can be helpful to all users, including children and older people.

Water accessible wheelchairs should be provided to assist users into the water when necessary.

Spas and saunas

Spas that provide level or ramped entry and saunas with wide door openings and adequate internal circulation spaces will be enjoyed by many people.

Alternative access through high childproof gates at spas should be provided, as well as operative components in spas and saunas that are easy to see and use.

A removable seat or 2 within any sauna provides easy access and control buttons that are large, easy to see and sit proud of the surrounding surface help ease of identification and use.

Water

The availability of drinking water for both people and animals is important. Children and adults as well as people using assistance animals will require access to drinking fountains, bowls or other ways of obtaining drinking water. Drinking fountains that are easy to reach, have large lever handles for operation and incorporate a low level drinking bowl for an assistance animal support access for everyone. A firm, slip-resistant surface around the installation to support access is also important.

Wayfinding and information

A successful wayfinding system should minimise anxiety and confusion, should be easy to understand and allow for everyone to equitably access all information provided. Wayfinding relies on a succession of communication cues provided throughout an environment. Cues may be visual, audible or tactile.

A visual wayfinding system incorporating cues such as architecture, landscape design, fountains, flagpoles, lighting, landmarks and other orientation points should be developed for the aquatic leisure centre.

Signage is also a critical key element of an effective wayfinding system.

Signs and information about key features including swimming pool depths, interactive elements and components such as wave pools or other water activity features are essential. In addition, signage identifying the location of car parking, toilets and buildings must be freely available in a range of formats so that people can prepare to enjoy the aquatic leisure centre they are visiting.

Consideration should be given to 4 different types of signs:

- identification
- information
- directional
- safety or regulatory, prohibition and advisory.

It is important to ensure that everyone can effectively interpret and use these different types of signage within the environment.

Accessible signage incorporates the positive elements of traditional signage as well as alternatives such as Braille, tactile and audio elements and gives consideration to a number of other key components that impact on accessibility and usability.

When designing accessible signage consideration should be given to the following:

- language
- location
- content
- typeface or font
- letter spacing
- size of letters
- appropriate symbols
- tactile and Braille
- contrast and colour
- illumination
- alternatives to traditional signage, for example, audio.

Signage incorporating the international symbol of access or deafness should be used to identify accessible elements where appropriate.

Lighting

Effective, glare-free lighting should be provided throughout areas that are likely to be used at night. This can include pathways, seating and building entrances and exits as well as areas that may pose a safety risk, such as at pedestrian and vehicle conflict areas, stairs and ramps and swimming pools. Switches for lighting should be either operated by a key stored in a lockable enclosure or locked in a controlled area accessible to authorised persons only. Accessibility should be considered when locating lighting controls, for example, installing the switch at an appropriate height.

Emergency exits

Emergency exits should be provided along a continuous, accessible path of travel to a nominated assembly area from all rooms within a building or pathways within the centre. Consideration must be given to all users including children, older adults and people using a range of aids such as prams, wheelchairs, hearing aids, assistance animals and white canes. Fire extinguishers should be easy to reach for everyone and incorporate clear instructions for use.

Both visible and audible emergency alarms should be installed in buildings and around the site to assist all users, as well as a public address system for use by the fire service to assist in directing people along the most accessible path of travel given the building or site condition at any one time.

Emergency exits and paths of travel should be kept clear of obstructions at all times.

Equipment and other items stored in buildings should not create any barriers.

Evacuation maps should be installed at accessible heights, be easy to read and available in alternative formats to assist all building and site users.

An emergency evacuation plan that addresses the needs of all building and site users should be developed and practiced during evacuation drills.

Checklist of key elements

Consideration must be given to universal design in aquatic leisure centres relating to a wide range of key elements. In relation to aquatic leisure centres the key elements include:

Paths of travel

- [Approaches, onsite roadways and pedestrian crossings](#)
- [Tracks and pathways](#)
- [Ramps](#) and [Stairs](#)
- [Lifts \(passenger\)](#)
- [Floor and ground surfaces](#)

Entrances and exits

- [Boom gates and entry control points](#)
- [Entrances and doorways](#)
- [Fences, gates and bollards](#)
- [Baffles and screens](#)
- [Keys, keypads and padlocks](#)
- [Emergency Exits](#)

Building and facilities

- [All buildings](#)
- [Childcare areas](#)
- [Hearing augmentation](#)
- [Internal corridors](#)
- [Kitchens](#)
- [Multipurpose rooms](#)
- [First aid rooms](#)
- [Retail areas](#)
- [Scoring areas](#)
- [Spectator and viewing areas](#)

Car parking, set down and waiting

- [Car parking](#)
- [Set down and waiting areas](#)
- [Vehicle guardrails and wheel stops](#)

Toilets, showers and change rooms

- [Toilets - Accessible, ambulant and portable](#)
- [Adult assisted change areas](#)
- [Baby change areas](#)
- [Family change areas](#)
- [Showers](#)

Installations

- [All installations](#)
- [Barbecues](#)
- [Bicycle storage and racks](#)
- [Drinking fountains](#)
- [Fire extinguishers and alarms](#)
- [Litter bins](#)
- [Seating and tables](#)
- [Shade and shelter](#)
- [Landscape design](#)
- [Signage and wayfinding](#)
- [Lighting and contrasts](#)

Communication and information

- [Catering for assistance animals](#)
- [Websites.](#)

4.5 Shared footpaths, walking trails and boardwalks

This section contains principles that can be interpreted and adapted to suit the outdoor recreation setting of shared footpaths, walking trails and boardwalks.

Outdoor and indoor sport and recreation settings vary considerably in their design, size, use and location, from the venue for a chess game, to a football ground.

This setting is described in terms of its role and use, outlining design principles to consider and to support use by everyone. Universal design key requirements and minimum standard access dimensions for specific elements relating to facilities and installations are provided for design that will assist in maximising the effective use of all areas.

The universal design key requirements have been developed as an easy to access checklist of issues to consider and the minimum access dimensions are based on the Australian Standards for Access and Mobility. While these Standards relate to the requirements of people with a range of access challenges and disabilities, they often generally improve access for all people.

This section contains principles that can be interpreted and adapted to suit the outdoor recreation setting of playspaces.

Shared footpaths and trails are used by both cyclists and pedestrians. They are often beside rivers, beaches or in parks and may be used by a large number of people, including users of mobility aids such as prams, strollers, scooters, wheelchairs and assistance animals at any one time.

Circular walking trails are preferable to linear paths because one-way traffic reduces the need for people to pass each other. They can also provide new experiences throughout the entire walk, rather than the same scene on the return journey.

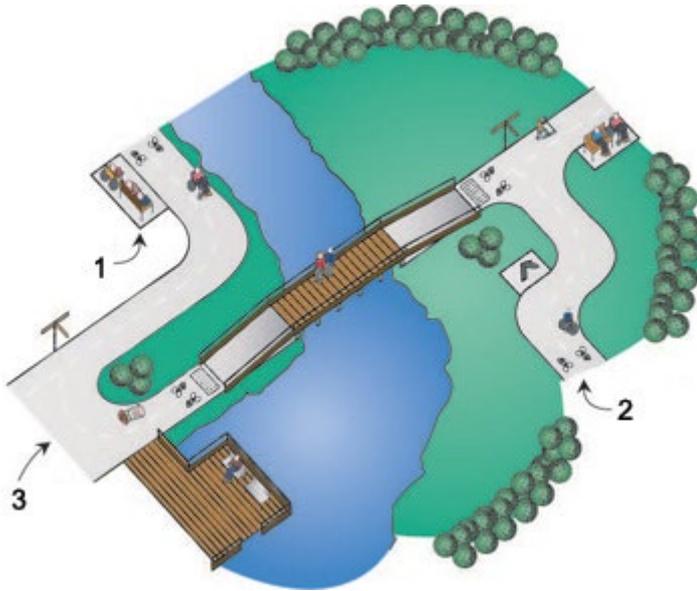
Walking trails should be designed to take people to the most scenic spots and will vary in length and complexity.

A boardwalk is a raised pathway, often made from timber or metal decking materials, and installed through significant terrain to provide easy access for everyone.

Boardwalks are ideal where the ground is rough or where the natural environment is fragile and needs to be protected from foot or vehicular traffic. They can provide effective temporary access for a venue such as a concert or be used to allow vegetation to regenerate. They are also useful in areas that are permanently or seasonally damp and soft or for access to areas high above the ground surface, for example, over mud or sand or through tree top viewing areas.

In some areas boardwalks will become bridges as they traverse gullies, creeks and broken or rough surfaces. They require access for everyone and must incorporate appropriate kerbs, hand rails and step free and slip resistant surfaces in both wet and dry conditions.

Figure 45: An example of a shared pathway setting



1. Seating connected to, but set back from a path by a minimum of 500 mm
2. Footpaths that are wide enough to allow pedestrians, bicycle or other mobility aid users to access the pathways safely.
3. The surface, edges and shoulders of pathways must be consistent and suitable for use by everyone. A firm, level and slip resistant surface in both wet and dry conditions is recommended.

Design Principles

The following key design principles should be considered when developing or upgrading shared footpaths, walking trails and boardwalks.

Location of walking trails and boardwalks

Consideration should be given to the provision of appropriate access to all shared paths for everyone, not simply those parts that are easiest to access. Access for pedestrians, cyclists and users of a range of mobility aids is necessary. Entry points to these shared areas should be easily identifiable and located close to any entry points of facilities in which they are located such as a park.

Width of paths

Consideration should be given to the expected usage of the pathway in the design phase, to ensure an adequate width is provided for all users.

The shared footpath, walking trail or boardwalks must be wide enough to allow pedestrians, bicycles or other mobility aid users to access the pathways safely and cater for simultaneous passing and overtaking, so that all speeds of traffic can flow without obstruction.

Consideration must be given to the needs of groups of people who may use the area at any one time. This will create congestion and pathways must be wide enough so that people are not forced off to the sides by faster traffic.

Specific areas for passing should be incorporated along pathways if a wide pathway cannot be provided for the entire length.

Gradient of paths

The approach to a pathway should incorporate level entry and avoid the use of ramps with steep gradients.

Steep slopes and excessive cross slopes will restrict access for many people. Where it is not possible to avoid these, consideration should be given to the provision of handrails and kerbs to assist users, as well as seating at regular intervals along the sides of the pathways for people who may need to rest.

Where a boardwalk is designed to be a bridge, easy to grip handrails, kerbs and safety barriers should be provided on both sides.

Surface of paths

The surface, edges and shoulders of pathways must be consistent and suitable for use by everyone. A firm, level and slip resistant surface in both wet and dry conditions is recommended.

Trip hazards can be reduced when consideration is given to minimising the space between planks, for example, wooden or metal ones, on the ground surface.

Information on shared paths

Safety of pedestrians, moving without the support of motorised mobility aids is paramount. It should be clear through signage and other information that this is the case. Designating specific usage zones on wider pathways will support the safety of users and assist with wayfinding. In addition, use of contrasting edges on pathways and the designation of specific usage zones, should be provided.

Signs should be installed at the beginning, end and at regular intervals along the pathway. They should contain relevant information to advise users of how the pathways are to be used, the degree of difficulty and the type of path surface and terrain they will encounter.

Use of international symbols on signs can assist tourists as well as people who may have difficulty reading. There is an international symbol for access or deafness that can be used to identify accessible elements where appropriate.

Consideration should also be given to information provision for people who may have vision or hearing limitations so they are aware of how the shared pathways are designed to be used, for example, a sign that directs users of bicycles to 'ring their bell' to alert pedestrians of their approach, may not assist a pedestrian with hearing limitations, so alternatives should be considered, such as clearly designated walking and cycling areas.

Provision of information will assist everyone to make informed decisions about how they may or may not choose to use the shared pathways.

Rest areas

Rest areas are particularly important on longer walking trails. Seating with backs and arm rests at regular intervals along a pathway, as well as some shade or shelter over some of these areas, will increase accessibility for everyone. Rest and seating areas should be provided off, but connected to, the pathway.

Where possible, ensure the rest area has an adjoining level surface, to allow users to deposit backpacks and locate strollers onto the ground while they sit and rest.

Lighting

Effective, glare free lighting should be provided on shared pathways that are likely to be used at night. This includes along the pathways, at seating and rest areas, entrances and exits points as well as areas that may pose a safety risk, such as at pedestrian and vehicle conflict areas and road crossing points.

Environmental suitability

Human intervention in some remote or natural areas should be sympathetic to the natural environment or the specific character of the location. In sensitive areas compromises may be necessary. Provision of wider pathways may not be possible and single - file tracks will be necessary. Consideration should be given to the provision of passing areas along these tracks.

Maintenance

Footpaths, walking trails and boardwalks should be well maintained and free of debris and other hazards. The effects of erosion must be monitored as well as changes due to high usage and varying weather conditions so that approaches and path surfaces do not become inaccessible.

Information should be provided to users if significant changes are expected to the condition of a path or trail, for example, snow, fallen debris and maintenance works.

Temporary pathway surfaces may also need to be installed during these times if the pathways are to remain open to everyone.

Checklist of key elements

Consideration must be given to universal design in aquatic leisure centres relating to a wide range of key elements. In relation to shared footpaths, walking trails and boardwalks the key elements include:

Paths of travel

- [Approaches, onsite roadways and pedestrian crossings](#)
- [Tracks and pathways](#)

Aquatic recreation areas

- [Beaches, lakes and rivers](#)
- [Jetties](#)

Entrances and exits

- [Fences, gates and bollards](#)

Installations

- [All installations](#)
- [Landscape design](#)
- [Signage and wayfinding](#)
- [Lighting and contrasts](#)

Toilets, showers and change rooms

- [Toilets - Accessible, ambulant and portable](#)
- [Baby change areas](#)
- [Family change areas](#)
- [Showers](#)

Communication and information

- [Catering for assistance animals.](#)

In addition, specific consideration should be given to shared footpaths, walking trails and boardwalks relating to:

- location
- width
- gradient
- surface
- signs
- rest areas
- environmental suitability
- maintenance.

4.6 Sports pavilions

This section contains principles that can be interpreted and adapted to suit the indoor recreation setting of sports pavilions.

Outdoor and indoor sport and recreation settings vary considerably in their design, size, use and location, from the venue for a chess game, to a football ground.

Each setting is described in terms of its role and use, outlining design principles to consider and to support use by everyone. Universal design key requirements and minimum standard access dimensions for specific elements relating to facilities and installations are provided for design that will assist in maximising the effective use of all areas.

The universal design key requirements have been developed as an easy to access checklist of issues to consider and the minimum access dimensions are based on the Australian Standards for Access and Mobility. Whilst these Standards relate to the requirements of people with a range of access challenges and disabilities, they often generally improve access for all people.

Sports pavilions are often located in sport and recreation reserves, so it is important to refer to the information in this guide relating to these when looking for information regarding sports pavilions.

Sports pavilions usually provide shelter, change and toilet facilities, indoor recreation and meeting spaces and dining areas, activity areas, kitchens and canteens for a range of sports groups.

Popular sports that typically occupy sports pavilions include football, cricket, soccer, netball, hockey, rugby and tennis as well as a range of others. A wide range of people participate in these sports, with some sports clubs targeting specific user groups. For example, wheelchair tennis and rugby are popular as well as cricket for people who are blind and football for people with an intellectual disability.

Sports pavilions are usually used on a seasonal basis and shared by several groups who will have a range of similar requirements during their particular sporting season.

For example, a football club often uses the facility during winter and a cricket club during summer. A netball club may use the facility year round.

Figure 46: An example of a sports pavilion with netball and tennis courts



1. Drinking fountains that are easy to reach, have large lever handles for operation, and incorporate a low level drinking bowl for an assistance animal, support access for everyone

2. Effective, glare free lighting should be provided throughout areas that are likely to be used at night

3. Sports pavilions should be located on a continuous accessible path of travel from the car parking and pedestrian entry points of the site

Design Principles

The following key design principles should be considered when developing sites for temporary facilities.

Sports pavilions

Sports pavilions should be located on a continuous accessible path of travel from the car parking and pedestrian entry points of the recreation reserve or site. They should provide level, step free entry free from revolving doors or turnstiles and wide door openings to accommodate all users, including people with mobility aids such as prams, strollers, wheelchairs or assistance animals. Self opening doors are preferred, with effective contrasts across any glass doors or areas that could be mistaken for a doorway, to ensure that the safety of users is not compromised.

Consideration should also be given to shelter close to, but not obstructing the principal entries, where some people may wish to store mobility aids while using the pavilion.

Wide internal walkways and doorways, clear of any obstructions on the floor surface and walls, and areas to pass easily are important. Level, slip resistant floor surfaces, in both wet and dry conditions, that do not incorporate any lips or tripping hazards should be maintained.

Access into each room of the pavilion is necessary so that users can participate in all activities and use required facilities. Fixtures and fittings that can be accessed by a smaller person or a child, as well as someone who is seated are necessary, for example, at customer service counters and information and display areas.

Any controls that are required to operate building elements such as lights or doors, should be easy to grip, see, reach and operate and be supplemented with clear, concise instructions for use where necessary. This should be provided in a range of formats, for example, written, audio and tactile to ensure that all users can effectively interpret the information provided.

In multiple level pavilions, either ramps with appropriate gradients, or lifts, should be provided to upper levels to support ease of use and movement. These should be easy to locate, with consideration given to the use of effective contrasts as well as raised tactile and Braille signage. Lifts should incorporate buttons that include raised tactile elements as well as Braille close to the buttons to support effective interpretation and wayfinding. Audio announcements should also be installed to identify floor levels.

Any stairs should incorporate effective contrast nosings on the stair treads. Stairs and ramps require easy to grip handrails and tactile ground surface indicators at the top and bottom.

Meeting and activity areas

Hearing augmentation should be provided in any meeting and activity spaces in pavilions, for example, in areas where team meetings or coaching clinics are held or where there are interactive drills or training DVDs that people can view and hear.

Captions on screens for people who may have limitations to hearing, as well as audio or tactile alternatives for people who may have limitations to vision, should also be considered. Good lighting is necessary for all users.

Kitchen, canteen or dining

Any pavilions that incorporate kitchen or dining areas should provide ease of access for everyone and incorporate a range of tables and seating heights and types for children and adults. Tables with extended ends so a person using a wheelchair can move underneath, lower height or adjustable benches, leg clearances under fixtures such as sinks and benches and access to taps, cupboards and equipment should all be considered.

Low height sections at bars and canteen counters, with adequate leg clearance underneath, assist a smaller person or someone using a wheelchair to reach the counter and interact effectively with people who are serving food and drinks. This also provides the opportunity for customers to easily view items on offer and make informed decisions about selections. Large print information regarding items for sale, including prices (where relevant), assist everyone.

Hearing augmentation and signage indicating this is available should also be installed at any screened counter area to support people who may have a hearing impairment. Unnecessary background noise such as radios or music should also be avoided.

Scoring and administration

Consideration should be given to the provision of accessible scoring and administration areas. This includes offices, score benches, viewing areas for scorers, scoreboards and audio announcement points.

Scoreboards should be easy to see and read from a long distance and incorporate alternative scoring systems that assist people with hearing and vision challenges. If a sound amplification system is provided, hearing devices should also be installed to assist spectators with hearing impairment.

If separate areas are provided for referees or umpires, accessible facilities should be included, such as a unisex accessible toilet and shower that are available for use by both males and females.

Checklist of key elements

Consideration must be given to universal design in aquatic leisure centres relating to a wide range of key elements. In relation to sports pavilions the key elements include:

Paths of travel

- [Approaches, onsite roadways and pedestrian crossings](#)
- [Tracks and pathways](#)
- [Ramps](#) and [Stairs](#)
- [Lifts \(passenger\)](#)
- [Floor and ground surfaces](#)

Car parking, set down and waiting

- [Car parking](#)
- [Set down and waiting areas](#)
- [Vehicle guardrails and wheel stops](#)

Entrances and exits

- [Boom gates and entry control points](#)
- [Entrances and doorways](#)
- [Fences, gates and bollards](#)
- [Baffles and screens](#)
- [Keys, keypads and padlocks](#)
- [Emergency Exits](#)

Toilets, showers and change rooms

- [Toilets - Accessible, ambulant and portable](#)
- [Adult assisted change areas](#)
- [Baby change areas](#)
- [Family change areas](#)
- [Showers](#)

Building and facilities

- [All buildings](#)
- [Childcare areas](#)
- [Hearing augmentation](#)
- [Internal corridors](#)
- [Kitchens](#)

- [Multipurpose rooms](#)
- [First aid rooms](#)
- [Retail areas](#)
- [Scoring areas](#)
- [Spectator and viewing areas](#)

Installations

- [All installations](#)
- [Barbecues](#)
- [Bicycle storage and racks](#)
- [Drinking fountains](#)
- [Fire extinguishers and alarms](#)
- [Litter bins](#)
- [Seating and tables](#)
- [Shade and shelter](#)
- [Landscape design](#)
- [Signage and wayfinding](#)
- [Lighting and contrasts](#)

Communication and information

- [Catering for assistance animals](#)
- [Websites](#)

4.7 Parks and greens

This section contains principles that can be interpreted and adapted to suit the outdoor recreation setting of parks and gardens.

Outdoor and indoor sport and recreation settings vary considerably in their design, size, use and location, from the venue for a chess game, to a football ground.

This setting is described in terms of its role and use, outlining design principles to consider and to support use by everyone. Universal design key requirements and minimum standard access dimensions for specific elements relating to facilities and installations are provided for design that will assist in maximising the effective use of all areas.

The universal design key requirements have been developed as an easy to access checklist of issues to consider and the minimum access dimensions are based on the Australian Standards for Access and Mobility.

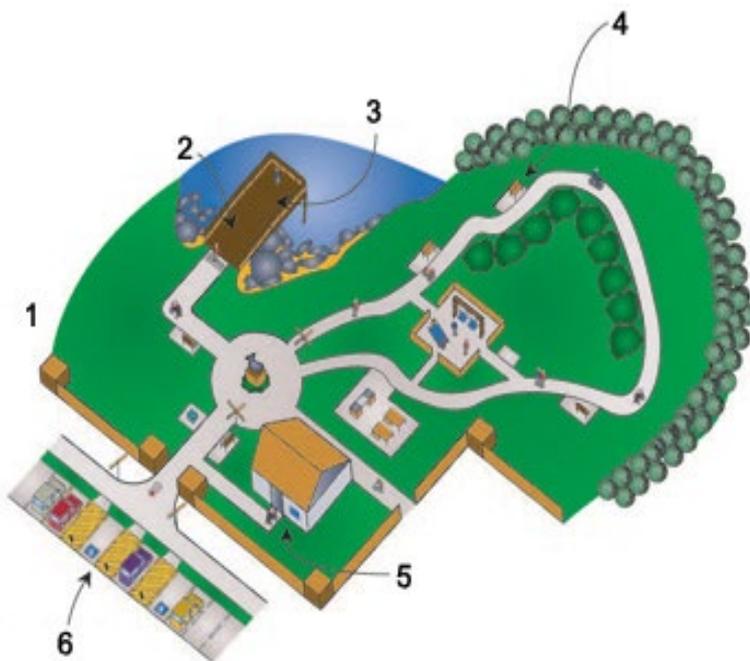
While these Standards relate to the requirements of people with a range of access challenges and disabilities, they often generally improve access for all people.

Parks and gardens have great recreational, social and wellbeing potential. They can offer a variety of walking tracks and play areas that are attractive to a wide range of people.

National, state and territory parks are generally remote from city centres and take in large areas of land. Camping may be allowed in certain locations, although the facilities provided are usually minimal to reduce the impact on the natural environment. Walking trails of varying types and complexity are often a feature of these parks.

Local parks and gardens vary in size and facilities. They may consist of a small grassed area that is used as parkland by local residents, or may be a formal garden with paths and garden beds. Children's play equipment, picnic areas and other installations and facilities may also be included.

Figure 47: An example of a park and gardens setting



1. All elements within parks and gardens should be connected via a continuous accessible path of travel, for example car parking, toilets, buildings, playspaces, drinking fountains, seating etc.
2. Appropriate gradients provided on any ramps to or at the jetty
3. An accessible non-slip pathway provided in both wet and dry conditions onto and along a jetty
4. Seats with backs and armrests to be provided at regular intervals. Installations are to be connected to, but setback a minimum of 500 mm from any pathway
5. Access to appropriate toilets and change rooms suitable for all users including people with mobility challenges, for example ambulant and unisex accessible toilets and family change rooms
6. Appropriate numbers of accessible parking bays to be provided.

Design Principles

The following key design principles should be considered when developing or upgrading parks and gardens.

Connections

All elements within parks and gardens should be connected via a continuous accessible path of travel, for example, car parking, toilets, buildings, play areas, drinking fountains and seating. These elements should be linked so that anyone can easily move to and through all of them and enjoy the location and the facilities to the maximum extent.

Approach

Parks and gardens require approach routes for both vehicles and pedestrians. These should be well signed with entry points that users can easily find. Use of environmental or architectural cues, a line of trees leading to the entry or similar structures that identify the entry point can assist.

Parking spaces for vehicles of various size and use, including cars, mini-buses and bicycles should be provided in any onsite car parking area. Consideration should be given to vehicles with side and rear loading capacity for people who may be using mobility aids, as well as enough overhead clearance to load and upload items stored on a vehicle's roof.

Shade and shelter over some parking bays that may be used by people who take a little longer to enter or exit their vehicle are also useful. These bays should be located as close as possible to the entry of the park or garden. The ground surface of the parking area, particularly at designated accessible parking bays, should be level and free from loose material. Use of trees or shrubs that drop foliage or seed pods should be avoided.

An uninterrupted path of travel, free from any hazards or difficult or uneven terrain, should lead users from the car park to the entry point/s of the park or garden.

Drop-off areas that can cater for a variety of vehicles, for example, buses, taxis or cars, should also be provided as close to the principal entry points as possible.

Entry points

Entry points should be easily identifiable and incorporate effective contrasts to the background area. Points of entry, including site, path, fields of play and building entrances, should be wide enough to cater for the access needs of all users. This includes people using mobility aids such as twin prams, scooters or wheelchairs and, for example, an adult with a child who is walking, but who needs to be held by the hand or a person with an assistance animal. Other users could be people carrying bags, cases and equipment.

Consideration should also be given to the type and weight of any gates or doors that may need to be used, to ensure they are not too heavy or difficult to operate.

Latches that can be used easily with one hand that are located at a low height for ease of use by a smaller person or someone using a wheelchair are important. Entry points that incorporate turnstiles, chicanes, or queuing lines can be difficult for some people to manage and alternatives such as clear doorway entrances should be provided.

Appropriate access through security gates, particularly during a temporary festival or event in the park or garden, should also be considered.

Paths

Continuous accessible paths of travel free from obstacles should be provided to all installations in parks and gardens including all playspaces and activities. They should incorporate alternatives to steps, be firm, stable and slip resistant and avoid excessive slopes and crossfalls whenever possible. Ramps with appropriate gradients, kerbs, handrails and landing and resting points should be provided where slopes cannot be avoided.

Paths should incorporate clear lines of sight at key decision making points, as well as visible and textural indication of any hazards, particularly at any location where there may be a pedestrian or vehicle conflict.

Paths should be wide enough for people to easily pass each other when coming from opposite directions. The width of the pathway should be considered in light of the number of expected users, for example, in areas that attract many people, pathways should be wide enough to allow groups of people to pass each other, including users of a range of mobility aids such as prams, walking frames and wheelchairs.

Observation areas

Observation areas are often in scenic spots and near inaccessible locations allowing people to take in a scene without going any further. They may be reached by a path, boardwalk, walking trail or located beside the road.

Observation areas along paths should be designed so that people who stop to enjoy the scene do not obstruct the path. Spaces should be provided beside, but connected to the path, for effective use by everyone. A wider section of path or an extended area beside the path, with a firm, level and slip resistant surface should be provided.

Consideration should be given to providing seating with backs and armrests at some of these locations, with enough room for users of a range of mobility aids to sit off the pathway in the observation area and transfer onto seating if they choose.

Where areas beside roads are reserved for scenic lookouts or points of interest, some space should be provided for vehicle users who may not be able to easily get out of their vehicle to take advantage of the view.

The location of these spaces needs to be planned effectively and any vegetation and fences designed accordingly. Fence height and construction are prime considerations.

Observation areas for pedestrians that are installed above ground level, (such as lookouts or viewing platforms), should incorporate barrier-free access with kerbs, easy to grip handrails and safety barriers that are effective, but don't impede the view, particularly for a smaller person, a child sitting in a stroller or a person sitting in a wheelchair.

Tiered observation areas or lookout towers can be made easier to use by considering the gradient of ramps and the incorporation of easy to grip handrails and the design of stairs, including contrast nosings on the stair treads. Firm, slip resistant surface finishes and the provision of seating and hooped handrails at the end of seating rows, as well as shade, and drinking water at the top, will also assist many people to enjoy the experience.

Provision of easy to use adjustable installations such as telescopes or other viewing devices can also increase the enjoyment of the area.

Landscape design

Landscape elements can include paths and garden beds, plants, trees and shrubs and interactive components such as a maze or labyrinth, as well as statues, sculptures, water features, hot houses and a variety of other landscape elements. These are all key components of many parks and gardens and consideration should be given to location, access, interpretation, usability and safety for everyone.

Limitations to a person's mobility, vision and hearing as well as the interpretation needs of both children and adults, should be taken into account in the design and access to these elements.

Key design issues to consider are outlined below:

- the selection and use of trees with foliage that does not overhang paths and drop branches, seed pods, berries or bark, which can create barriers for all users
- use of landscaping design and elements to assist with wayfinding, for example:
- planting of shade trees and plants with different aromas and sounds that can assist users with wayfinding through the area as well as enhance the ambience of the space and create a sense of wellbeing
- a large sculpture near the entry of a building that can act as a key wayfinding element to assist users to find their way to the entry point
- consistent use of lightly textured paving, across a pathway to identify the direction to a viewing or seating area which assists people with limitations to vision and other people when looking for somewhere to rest
- easy to find and follow paths of travel created by the use of low growing plants along path edges, to features such as statues or water fountains and other key viewing elements
- installation of interesting engagement points such as a maze or labyrinth, to encourage exploration and 'safe' risk taking
- installation of sculptures and structures that can be 'felt' as well as 'seen'
- incorporating interesting seating designs, with backs and armrests, within landscape structures
- effective maintenance of sight lines, particularly in areas where key decision making is required, in isolated locations where personal safety could be compromised, or near any family use areas such as playspaces.

Installations

Installations such as litter bins, seating, lighting, drinking fountains (incorporating a low height dog bowl), dog dropping collection points and other installations must be usable by everyone. These should be located off, but connected to, a continuous accessible path of travel. People should be able to easily approach, reach and use the installation.

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All installations should incorporate low height, easy to use controls, that can be reached by a smaller person. They should incorporate adequate leg clearance underneath to accommodate someone who is seated. Consideration of the angles of approach and clear space for a person to move around the installations is also important.

Controls with large push buttons that protrude or extend beyond the surrounding surface, or with large levers are usually easier to use. Avoid any controls that require a person to use fine motor skills like 'one pointed finger' or that require a constant pressure to operate. The ability for one handed operation is preferred. Sensor operated controls that activate by sensing movement underneath or close to the installation also support ease of use.

The use of effective colour and luminance contrast to adjacent and background surfaces, on installations and elements within installations, will make them easier to identify and also assist with understanding how they are used.

Picnic and rest areas

Rest and picnic areas should include seating with backs and armrests, tables with extended ends or clear spaces to allow for a person using a wheelchair to move underneath or to clip on a child restraint.

Barbecues must be useable by everyone with controls at the front of the hot plate. This ensures they are easy to reach and eliminates the need for people to reach over the top of the hot plate.

A level bench top next to the hotplate, made from glare free, heat resistant material, allows a person to move hot pans and other items easily on and off the hot plate, without the need to lift heavy items.

Barbecues should be located off, but connected to, a continuous accessible path of travel, as well as being close to other important facilities such as toilets and playspaces.

Shade and shelter should be provided over some of these areas so that, depending on weather conditions, people can choose what will best suit their needs.

Where picnic and rest areas incorporate structures, such as a rotunda, there should be level or step free access available, as an alternative to stairs.

Companion animal free zones

Whilst it is important for users of service or assistance animals (animals that have been trained to perform tasks that assist people with disabilities) to have equitable access to recreation reserves, consideration should be given to areas where companion animals (pets) are restricted to leads. Older people and young children can become anxious when approached by free running companion animals that may trip or injure them. Some people will also have allergies to animals and will benefit from being able to use areas free from direct contact with companion animals.

Buildings

All buildings should be located on a continuous accessible path of travel from the car parking and pedestrian entry points of the park or garden. They should provide level, step free entry with no revolving doors or turnstiles and with wide door openings to accommodate all users, including people with mobility aids such as prams, strollers, wheelchairs or assistance animals. Self opening doors are preferred, with effective contrasts across any glass doors or areas that could be mistaken for a doorway, to ensure that the safety of users is not compromised.

Consideration should also be given to shelter close to, but not obstructing the principal entries, where some people may wish to store mobility aids while using the building.

Wide internal walkways and doorways, clear of any obstructions on the floor surface and walls, and areas to pass easily are important. Level, slip resistant floor surfaces - in both wet and dry conditions - that do not incorporate any lips or tripping hazards should be maintained.

Access into each room of the building is necessary so that users can participate in all activities and use required facilities. Fixtures and fittings that can be accessed by a smaller person or a child, as well as someone who is seated are necessary, for example, at customer service counters and information and display areas.

Any controls that are required to operate building elements such as lights or doors, should be easy to grip, see, reach and operate, and be supplemented with clear, concise instructions for use where necessary. These instructions should be provided in a range of formats, for example, written, audio and tactile to ensure that all users can effectively interpret the information provided.

In multiple level buildings, either ramps with appropriate gradients, or lifts, should be provided to upper levels to support ease of use and movement. These should be easy to locate, with consideration given to the use of effective contrasts as well as raised tactile and Braille signage. Lifts should incorporate buttons that include raised tactile elements as well as Braille close to the buttons to support effective interpretation and wayfinding. Audio announcements should also be installed to identify floor levels.

Any stairs should incorporate effective contrast nosings on the stair treads. Stairs and ramps require easy to grip handrails and tactile ground surface indicators at the top and bottom.

Hearing augmentation should be provided in any buildings where people may meet, for example, to begin a guided walk through the park or garden, or where there are interactive displays that people can listen to. Captions on screens for people who may have limitations to hearing, as well as audio or tactile alternatives for people who may have limitations to vision should also be considered. Good lighting is necessary for all users.

Any buildings that incorporate kitchen or dining areas should provide ease of access for everyone and incorporate a range of tables and seating heights and types for children and adults. Tables with extended ends so a person using a wheelchair can move underneath, lower height or adjustable benches, leg clearances under fixtures such as sinks and benches and access to taps, cupboards and equipment should all be considered.

Toilets and change rooms

If toilets and change rooms are provided they should be available for use by everyone. In addition to male and female areas, unisex accessible toilets, showers and change rooms are required as these can be effectively used by children as well as adults and carers, including people with a range of access challenges.

Key elements to consider include:

- located on a continuous accessible path of travel from the car parking and pedestrian entry points
- adequate room size and circulation space
- wide door opening, with a sliding door where possible
- easy to see and use door occupied indicator, handle and flushing control
- appropriate grab rails at the side and back of the toilet pan
- appropriate toilet pan distance from the side and rear wall
- toilet paper that is easily reached from the pan
- soap dispenser and hand dryer that are easily reached from the hand basin
- hand basin at an accessible height with appropriate leg clearance underneath
- baby change table where space allows
- adjustable height shower head
- non -slip shower seat with legs for support
- grab rails on walls of shower
- level, slip resistant floor surfaces in both wet and dry conditions
- adult change table with a hoist
- interconnecting change spaces with a lockable door in between
- facilities for both left and right handed users
- provision of ambulant accessible facilities that are useful for people who use mobility aids such as prams and strollers.

Playspaces

Access to playspaces for both children and adults is important. Play provides important motivation for children to become active, engage with others, extend themselves and adapt and learn skills. There are many physical, social, cognitive and emotional benefits that accrue from play.

Many grandparents with access challenges as well as parents or other supervising adults will accompany children to playspaces. Many people will be using mobility aids such as prams and strollers and others may also use wheelchairs, scooters or assistance animals. Good access is important for everyone.

Passive playspaces as well as play structures for climbing, balancing, hanging, running, swinging, rocking and rolling, should all be considered. Access to and through each element is important and supports both cognitive and social play experiences. Some key elements of playspaces include:

- multipurpose play activities such as sand diggers, climbing equipment, ball courts, cubbies or swings
- interesting places or surfaces that suggest particular games or encourage activities such as rolling, hiding or running
- vegetation, sand or loose materials that invite building, collecting or creative imaginative play
- elements that provide acceptable risk, changes in surfaces and sensory elements that include tactile, audible and components with scent or smell
- maintenance of clear sightlines to assist with supervising children.

Infrastructure that supports users of playspaces such as direct access to toilets, drinking fountains, seats at various heights, shade and shelter over viewing areas is also important.

Consideration should be given to the size and location of the playspace and the target audience that it is intended to service when designing the playspace. This will assist in determining what elements should be included and what structures, installations and access supports should be provided.

Water

The availability of drinking water for both people and animals is important. Children and adults as well as people using assistance animals will require access to drinking fountains, bowls or other ways of obtaining drinking water. Drinking fountains that are easy to reach, have large lever handles for operation and incorporate a low level drinking bowl for an assistance animal support access for everyone. A firm, slip resistant surface around the installation to support access is also important.

Wayfinding and information

A successful wayfinding system should minimise anxiety and confusion, should be easy to understand and allow for everyone to equitably access all information provided. Wayfinding relies on a succession of communication cues provided throughout an environment. Cues may be visual, audible or tactile.

A visual way finding system incorporating cues such as architecture, landscape design, fountains, flagpoles, lighting, landmarks and other orientation points should be developed for the park or garden.

Signage is also a critical key element of an effective way finding system.

Signs and information about key features including walking trails, places of interest, interactive elements and components of the area, as well as the location of car parking, toilets and buildings must be freely available in a range of formats, so that people can prepare to enjoy the park or garden they are visiting.

Consideration should be given to 4 different types of signs:

- identification
- information
- directional
- safety or regulatory, prohibition and advisory.

It is important to ensure that everyone can effectively interpret and use these different types of signage within the environment.

Accessible signage incorporates the positive elements of traditional signage as well as alternatives such as Braille and tactile and audio elements and gives consideration to a number of other key components that impact on accessibility and usability. When designing accessible signage, consideration should be given to the following:

- language
- location
- content
- typeface or font
- letter spacing
- size of letters
- appropriate symbols
- tactile and Braille
- contrast and colour
- illumination
- alternatives to traditional signage, for example, audio.

Signage incorporating the international symbol of access and or deafness should be used to identify accessible elements where appropriate.

Lighting

Effective, glare free lighting should be provided throughout areas that are likely to be used at night. This can include pathways, seating and building entrances and exits as well as areas that may pose a safety risk, such as at pedestrian and vehicle conflict areas, stairs and ramps.

Emergency exit

Emergency egress should be provided along a continuous, accessible path of travel to a nominated assembly area from all rooms within a building or pathways within the site. Consideration must be given to all users including children, older adults and people using a range of aids such as prams, wheelchairs, hearing aids, assistance animals and white canes. Fire extinguishers should be easy to reach for everyone and incorporate clear instructions for use.

Both visible and audible emergency alarms should be installed in buildings and around the site to assist all users as well as a public address system for use by the fire service to assist in directing people along the most accessible path of travel given the building or site condition at any one time.

Emergency exits and paths of travel should be kept clear of obstructions at all times.

Equipment and other items stored in buildings should not create any barriers.

Evacuation maps should be installed at accessible heights, be easy to read and available in alternative formats to assist all building and site users.

An emergency evacuation plan that addresses the needs of all building and site users should be developed and practiced during evacuation drills.

Checklist of key elements

Consideration must be given to universal design in aquatic leisure centres relating to a wide range of key elements. In relation to parks and greens the key elements include:

Paths of travel

- [Approaches, onsite roadways and pedestrian crossings](#)
- [Tracks and pathways](#)

Car parking, set down and waiting

- [Car parking](#)
- [Set down and waiting areas](#)
- [Vehicle guardrails and wheel stops](#)

Entrances and exits

- [Boom gates and entry control points](#)
- [Fences, gates and bollards](#)
- [Baffles and screens](#)

Building and facilities

- [All buildings](#)
- [Spectator and viewing areas](#)

Aquatic recreation areas

- [Beaches, lakes and rivers](#)

Specialist recreation elements

- [Temporary facilities](#)

Toilets, showers and change rooms

- [Toilets - Accessible, ambulant and portable](#)
- [Baby change areas](#)
- [Family change areas](#)
- [Showers](#)

Installations

- [All installations](#)
- [Barbecues](#)
- [Bicycle storage and racks](#)
- [Drinking fountains](#)
- [Litter bins](#)
- [Seating and tables](#)
- [Shade and shelter](#)
- [Landscape design](#)
- [Signage and wayfinding](#)
- [Lighting and contrasts](#)

Communication and information

- [Catering for assistance animals](#)
- [Websites](#)

4.8 Temporary facilities

This section contains principles that can be interpreted and adapted to suit the outdoor recreation setting of temporary facilities.

Outdoor and indoor sport and recreation settings vary considerably in their design, size, use and location, from the venue for a chess game, to a football ground.

This setting is described in terms of its role and use, outlining design principles to consider and to support use by everyone. Universal design key requirements and minimum standard access dimensions for specific elements relating to facilities and installations are provided for design that will assist in maximising the effective use of all areas.

The universal design key requirements have been developed as an easy to access checklist of issues to consider and the minimum access dimensions are based on the Australian Standards for Access and Mobility. Whilst these Standards relate to the requirements of people with a range of access challenges and disabilities, they often generally improve access for all people.

Special events such as community festivals and equestrian events are often staged in temporary locations. Planning should include the needs of everyone who may wish to attend including families, teenagers, older people and people with a range of access challenges.

The choice of site is critical as well as a number of key features that must be considered for the event to be accessible to everyone. These include providing accessible:

- toilets
- parking areas
- transport drop off points
- event bus stops
- tents or marquees for market stalls and exhibitors
- heavy vehicles such as horse trucks and horse floats
- food vendor vehicles and stalls
- drinking water units
- rubbish and recycling bins
- pathways
- fencing barriers
- scooter recharge points
- onsite transport
- signage and information
- hearing augmentation
- information
- access map of site
- emergency procedures.

Figure 48: An example of a sport and recreation setting with temporary facilities



1. Appropriate numbers of accessible parking bays to be provided
2. Use of materials to create temporary pathways across uneven surfaces such as grass or sand may need to be used. Plastic or rubber matting or low pile carpet may be useful in some instances

Design Principles

The following key design principles should be considered when developing sites for temporary facilities:

Connections

All elements within temporary facilities should be connected via a continuous accessible path of travel, for example, car parking, toilets, buildings, fields of play, playspaces, drinking fountains and seating. These elements should be linked so that anyone can easily move to and through all of these and participate in the activities and facilities provided.

Approach

Temporary facilities require approach routes for both vehicles and pedestrians. These should be well signed with entry points that users can find easily. Use of environmental or architectural cues, a line of trees leading to the entry or similar structures that identifies the entry point can assist.

Parking spaces for vehicles of various size and use, including cars, mini buses and bicycles should be provided in any onsite car parking area. Consideration should be given to vehicles with side and rear loading capacity for people who may be using mobility aids, as well as enough overhead clearance to load and upload items stored on the vehicle roof.

Shade and shelter over some parking bays, that may be used by people who take a little longer to enter or exit their vehicle is also useful. These bays should be located as close as possible to the principal entry points of the facilities provided. The ground surface of the parking area, particularly at designated accessible parking bays, should be level and free from loose material. Use of trees or shrubs that drop foliage or seed pods should be avoided.

An uninterrupted path of travel, free from any hazards or difficult or uneven terrain, should lead users from the car park to the entry points of the facilities.

Drop off areas that can cater for a variety of vehicles, for example, bus, taxi or car, should also be provided as close as possible to principal entry points.

Entry points

As well as being easily identifiable and incorporating effective contrasts to the background area, points of entry, including site, paths, fields of play and building entrances, should be wide enough to cater for the access needs of all users. This includes people who may be using mobility aids such as twin prams, scooters or wheelchairs and, for example, an adult with a child who is walking but who needs to be held by the hand, or a person with an assistance animal. Other users might be people carrying bags or wheeling trolleys.

Consideration should also be given to the type and weight of any gates or doors that may need to be used to ensure they are not too heavy or difficult to operate.

Latches that can be used easily with one hand that are located at a low height for ease of use by a smaller person or someone using a wheelchair are important. Entry points that incorporate turnstiles, chicanes or queuing lines can be difficult for some people to manage and alternatives should be provided. Appropriate access through security gates, particularly during a temporary festival or event, should also be considered.

Paths

Continuous, accessible paths of travel free from obstacles should be provided. They should incorporate alternatives to steps, be firm, stable and slip resistant and avoid excessive slopes and crossfalls whenever possible. Ramps with appropriate gradients, kerbs, handrails and landing and resting points should be provided where slopes cannot be avoided. Paths should incorporate clear lines of sight at key decision making points, as well as visible and textural indication of any hazards, particularly at any location where there may be a pedestrian and vehicle conflict.

Paths should be wide enough for people to easily pass each other when coming from opposite directions. The width of the pathway should be considered in light of the number of expected users, for example, in areas that attract many people, pathways should be wide enough to allow groups of people to pass each other, including users of a range of mobility aids such as prams, walking frames and wheelchairs.

Use of materials to create temporary pathways across uneven surfaces such as grass or sand may need to be used. Plastic or rubber matting or low pile carpet may be useful in some instances. Timber or metal decking should also be considered and can often be used to create ramps to temporary facilities across the site and to connect a range of temporary installations including toilets, displays and stalls.

Portable ramps can also be used where appropriate. Any temporary pathways should incorporate safe, non-slip and level surfaces as well as handrails and kerbs on temporary ramps.

Spectator areas

Spectator areas for everyone should be provided at various locations at each facility where activities are held. Consideration should be given to locations that will cater for users of mobility aids such as prams, strollers, wheelchairs, scooters and assistance animals so people can sit with family and friends.

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All spectator seating and viewing areas must have clear lines of sight to any playing area, scoreboards and television monitors (wherever provided). Scoreboards should be easy to see and read from a long distance and incorporate audible alternatives.

Alternative scoring systems that assist people with hearing and vision limitations should also be provided. If a sound amplification system is provided, assistive hearing devices should also be installed to assist spectators with a hearing impairment. Assistive hearing devices can be used with or instead of hearing devices.

Any spectator areas along paths should be designed so that people do not obstruct the path when stopping to view the activity. Spaces should be provided beside, but connected to, the path for effective use by everyone. A wider section of path or an extended area beside the path with a firm, level and slip-resistant surface should be available.

Consideration should be given to installing seating with backs and armrests at some of these locations with enough room for users of a range of mobility aids to sit off the pathway with other people.

Where areas are reserved for spectator viewing from vehicles, spaces should be provided for people who may not easily be able to get out of their vehicle or who require additional space to maneuver mobility aids when entering and exiting the vehicle.

The location of these spaces needs to be planned effectively and any vegetation and fencing designed accordingly. Fence height and construction are prime considerations.

Spectator areas that are installed above ground level, such as viewing platforms, should incorporate barrier-free access with kerbs, easy to grip handrails and safety barriers that are effective but don't impede the view, particularly for a smaller person, a child sitting in a stroller or a person sitting in a wheelchair.

Tiered spectator areas or scoring towers can be made easier to use by considering the gradient of ramps and the incorporation of easy to grip handrails and the design of stairs, including using contrast nosings on the stair treads. Firm, slip-resistant surface finishes, provision of seating and hooped handrails at the end of seating rows, as well as shade and drinking water at the top, will also assist many people to enjoy the experience.

Seating spaces should also be deep and wide enough to enable a person to feel safe from falling if in a tiered spectator area.

Lifts should be provided in structures that are designed for spectators to view activities from levels above the ground.

Landscape design

Installation of any temporary landscaping elements should consider the access needs of everyone. These can include paths and garden beds, potted plants, trees, shrubs, temporary activity points and other installations such as statues, sculptures and water features.

Consideration should be given to location, access, interpretation, usability and safety for everyone. Limitations to a person's mobility, vision and hearing as well as the interpretation needs of both children and adults should be taken into account in the design and access to these elements.

Key design issues to consider include:

- the selection and use of potted plants with foliage that does not overhang paths or activity areas and drop branches, seed pods, berries or bark, which can create barriers for all users
- use of landscaping design and elements to assist with wayfinding. For example:
- use of potted plants with different aromas and sounds that can assist users with wayfinding through the area as well as enhance the ambience of the space and create a sense of wellbeing
- a large sculpture near the entry of a building or playing area that can act as a key wayfinding element to assist users to find their way to the entry point
- consistent use of lightly textured temporary surface material across a pathway, to identify the direction to a viewing or seating area which assists people with limitations to vision, and other people when looking for somewhere to rest
- easy to find and follow paths of travel connecting key elements on the site, created by use of temporary pathways with potted plants along path edges
- activities and installation of interesting accessible engagement points, related to the event being held, that can be 'felt' as well as 'seen'
- incorporating interesting seating designs, with backs and armrests, within landscape structures
- effective maintenance of sight lines, particularly in spectator areas, at key decision making points, isolated locations where personal safety could be compromised or any family use areas such as playgrounds.

Installations

Installations such as litter bins, seating, lighting, drinking fountains (incorporating a low height dog bowl), dog dropping collection points and other installations must be usable by everyone. These should be located off, but connected to, a continuous, accessible path of travel. People should be able to easily approach, reach and use the installations.

All installations should incorporate low height, easy to use controls that can be reached by a smaller person. They should incorporate adequate leg clearance underneath to accommodate someone who is seated. Consideration of the angles of approach and clear space for a person to move around the installations is also important.

Controls with large push buttons that protrude or extend beyond surrounding surface or large levers are usually easier to use. Avoid any controls that require a person to use fine motor skills like 'one pointed finger' or that require a constant pressure to operate. The ability for one handed operation is preferred. Sensor operated controls that activate by sensing movement underneath or close to the installation also support ease of use.

The use of effective colour and luminance contrast to adjacent and background surfaces on installations and elements within installations will make them easier to identify and also assist with understanding how they are used.

Picnic and rest areas

Rest and picnic areas should include seating with backs and armrests and tables with extended ends or clear spaces to allow for a person using a wheelchair to move underneath or a person to clip on a child restraint.

Barbecues must be useable by everyone with controls at the front of the hotplate. This ensures they are easy to reach and eliminates the need for people to reach over the top of the hotplate.

A level benchtop next to the hotplate, made from glare-free, heat-resistant material, allows a person to move hot pans and other items easily on and off the hotplate without the need to lift heavy items.

Barbecues should be located off, but connected to, a continuous, accessible path of travel, as well as being close to other important facilities such as toilets and playspaces.

Shade and shelter should be provided over some of these areas so that, depending on weather conditions, people can choose what will best suit their needs.

Where picnic and rest areas incorporate structures, such as a rotunda, there should be level or step-free access available as an alternative to stairs.

Buildings

All buildings should be located on a continuous, accessible path of travel from the car parking and pedestrian entry points of the temporary site. They should provide level, step-free entry with no revolving doors or turnstiles and with wide door openings to accommodate all users, including people with mobility aids such as prams, strollers, wheelchairs or assistance animals. Self-opening doors are preferred, with effective contrasts across any glass doors or areas that could be mistaken for a doorway to ensure that the safety of users is not compromised.

Consideration should also be given to shelter close to, but not obstructing, the principal entries where some people may wish to store mobility aids while using the building.

Wide internal walkways and doorways, clear of any obstructions on the floor surface and walls, and areas to pass easily are important. Level, slip-resistant floor surfaces in both wet and dry conditions that do not incorporate any lips or tripping hazards should be maintained.

Access into each room of the building is necessary so that users can participate in all activities and use required facilities. Fixtures and fittings that can be accessed by a smaller person or a child, as well as someone who is seated, are necessary, for example, at customer service counters and information and display areas.

Any controls that are required to operate building elements, such as lights or doors, should be easy to grip, see, reach and operate and be supplemented with clear, concise instructions for use where necessary. These instructions should be provided in a range of formats, for example, written, audio and tactile, to ensure that all users can effectively interpret the information provided.

In multiple level buildings, either ramps with appropriate gradients or lifts should be provided to upper levels to support ease of use and movement. These should be easy to locate, with consideration given to the use of effective contrasts as well as raised tactile and Braille signage.

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Lifts should incorporate buttons that include raised tactile elements as well as Braille close to the buttons to support effective interpretation and wayfinding. Audio announcements should also be installed to identify floor levels.

Any stairs should incorporate effective contrast nosings on the stair treads. Stairs and ramps require easy to grip handrails and tactile ground surface indicators at the top and bottom.

Hearing augmentation should be provided in any buildings where people may meet, for example, where a festival committee may need to meet or where there are interactive displays that people can listen to. Captions on screens for people who may have limitations to hearing, as well as audio or tactile alternatives for people who may have limitations to vision, should also be considered. Good lighting is necessary for all users.

Any buildings that incorporate kitchen or dining areas should provide ease of access for everyone and incorporate a range of tables and seating heights and types for children and adults. Tables with extended ends so a person using a wheelchair can move underneath, lower height or adjustable benches, leg clearances under fixtures such as sinks and benches and access to taps, cupboards and equipment should all be considered.

Toilets and change rooms

Toilets and change rooms should be available for use by everyone. In addition to male and female areas, unisex accessible toilets, showers and change rooms are required as these can be effectively used by children as well as adults, including people with a range of access challenges.

Key elements to consider include:

- located on a continuous accessible path of travel from the car parking and pedestrian entry
- adequate room size and circulation space
- wide door opening, with a sliding door where possible
- easy to see and use door occupied indicator, handle and flushing control
- appropriate grab rails at the side and back of the toilet pan
- appropriate toilet pan distance from the side and rear wall
- toilet paper that is easily reached from the pan
- soap dispenser and hand dryer that are easily reached from the hand basin
- hand basin at an accessible height with appropriate leg clearance underneath
- baby change table where space allows
- adjustable height shower head
- non-slip shower seat with legs for support
- grab rails on walls of shower
- level, slip resistant floor surfaces in both wet and dry conditions
- adult change table with a hoist
- interconnecting change spaces with a lockable door in between

- facilities for both left and right handed users
- provision of ambulant accessible facilities which are useful for people who use mobility aids such as prams and strollers.

If portable toilets are to be provided at the temporary site, consideration must be given to the expected number of visitors to the event to adequately meet demand.

Portable accessible facilities, with both left- and right-hand configurations should be available.

Designated accessible facilities will benefit many people, so it is important to provide a number of these to support people using wheelchairs as well as parents with prams and young children who will benefit from the additional space and facilities available.

Playspaces

Access to playspaces for both children and adults is important. Play provides important motivation for children to become active, engage with others, extend themselves and adapt and learn skills. There are many physical, social, cognitive and emotional benefits that accrue from play.

Many people will be using mobility aids such as prams and strollers and others may also use wheelchairs, scooters or assistance animals. Many grandparents will accompany children to sporting activities. Good access is important for everyone.

Passive playspaces as well as play structures for climbing, balancing, hanging, running, swinging, rocking and rolling should all be considered. Access to and through each element is important and supports both cognitive and social play experiences.

Some key elements of playspaces include:

- multipurpose play activities such as sand diggers, climbing equipment, ball courts, cubbies or swings
- Interesting places or surfaces that suggest particular games or encourage activities such as rolling, hiding or running
- vegetation, sand or loose materials that invite building, collecting or creative imaginative play
- elements that provide acceptable risk, changes in surfaces and sensory elements that include tactile, audible and olfactory components
- maintenance of clear sightlines to assist with supervising children.

Infrastructure that supports users of playspaces such as direct access to toilets, drinking fountains, seats at various heights, shade and shelter over spectator areas is also important.

Temporary play structures that are provided for an event should incorporate elements that can be used by people across a range of ages and abilities. They should also consider the needs of people using wheelchairs and other mobility aids. Access to and onto the structure or installation is required.

Water

The availability of drinking water for both people and animals is important. Children and adults as well as people using assistance animals will require access to drinking fountains, bowls or other ways of obtaining drinking water. Drinking fountains that are easy to reach, have large lever handles for operation and incorporate a low level drinking bowl for an assistance animal support access for everyone. A firm, slip-resistant surface around the installation to support access is also important.

Wayfinding and information

A successful wayfinding system should minimise anxiety and confusion, should be easy to understand and allow for everyone to equitably access all information provided. Wayfinding relies on a succession of communication cues provided throughout an environment. Cues may be visual, audible or tactile.

A visual wayfinding system incorporating cues such as architecture, landscape design, fountains, flagpoles, lighting, landmarks and other orientation points should be developed for the temporary site and event.

Signage is also a critical key element of an effective wayfinding system.

Signs and information about key features including site features and interactive event elements and components of the site, as well as the location of car parking, toilets and buildings, must be freely available in a range of formats so that people can prepare to enjoy the event.

Consideration should be given to 4 types of signs:

- identification
- information
- directional
- safety or regulatory, prohibition and advisory.

It is important to ensure that everyone can effectively interpret and use these different types of signage within the environment.

Accessible signage incorporates the positive elements of traditional signage as well as alternatives such as Braille, tactile and audio elements and gives consideration to a number of other key components that impact on accessibility and usability. When designing accessible signage, consideration should be given to the following:

- language
- typeface or font
- letter spacing
- content
- location
- size of letters
- tactile
- appropriate symbols and Braille

- contrast and colour
- illumination
- alternatives to traditional signage, for example, audio.

Signage incorporating the international symbol of access or deafness should be used to identify accessible elements where appropriate.

Temporary signage should be kept clear of paths of travel and be located at prominent locations at an accessible height to assist all visitors to the site.

Lighting

Effective, glare-free lighting should be provided throughout areas that are likely to be used at night. This can include pathways, seating and building entrances and exits as well as areas that may pose a safety risk, such as at pedestrian and vehicle conflict areas, stairs and ramps.

Portable lighting may be required and should be located to ensure that any power cords, boxes or other related equipment do not create access barriers on paths of travel, either overhead and on ground surfaces.

Temporary structures

Level or ramped entry should be provided to temporary food and drink outlets, stalls and display elements or areas and counter heights should be accessible for someone who is seated.

A raised platform with suitable kerbs and railings along the front and sides should be provided for viewing activities where this may be difficult for a person who is seated to do so from the ground level, for example, a concert or event being presented on a stage, playing field or race track.

Level or ramped access is required to stages and other areas where performances or activities are held and accessible seating locations that provide effective sightlines must be available at these areas.

Emergency exits

Emergency exits should be provided along a continuous, accessible path of travel to a nominated assembly area from all rooms within a building or pathways within the site. Consideration must be given to all users including children, older people and people using a range of aids such as prams, wheelchairs, hearing aids, assistance animals and white canes.

Fire extinguishers should be easy to reach for everyone and incorporate clear instructions for use.

Both visible and audible emergency alarms should be installed in buildings and around the site to assist all users, as well as a public address system for use by the fire service to assist in directing people along the most accessible path of travel given the building or site condition at any one time.

Emergency exits and paths of travel should be kept clear of obstructions at all times.

Equipment and other items stored in buildings should not create any barriers.

Evacuation maps should be installed at accessible heights, be easy to read and available in alternative formats to assist all building and site users. An emergency evacuation plan that addresses the needs of all building and site users should be developed and practised during evacuation drills.

Checklist of key elements

Consideration must be given to universal design in temporary facilities relating to a wide range of key elements. In relation to temporary facilities, the key elements include:

Paths of travel

- [Approaches, onsite roadways and pedestrian crossings](#)
- [Tracks and pathways](#)
- [Ramps](#) and [Stairs](#)
- [Lifts \(passenger\)](#)
- [Floor and ground surfaces](#)

Car parking, set down and waiting

- [Car parking](#)
- [Set down and waiting areas](#)
- [Vehicle guardrails and wheel stops](#)
- [Boom gates and entry control points](#)

Entrances and exits

- [Fences, gates and bollards](#)
- [Baffles and screens](#)
- [Keys, keypads and padlocks](#)
- [Emergency Exits](#)

Toilets, showers and change rooms

- [Toilets - Accessible, ambulant and portable](#)
- [Adult assisted change areas](#)
- [Baby change areas](#)
- [Family change areas](#)
- [Showers](#)

Building and facilities

- [All buildings](#)
- [Customer service areas](#)
- [Internal corridors](#)
- [Kitchens](#)
- [Multipurpose rooms](#)
- [Retail areas](#)
- [Scoring areas](#)
- [Spectator and viewing areas](#)

Installations

- [All installations](#)
- [Barbecues](#)
- [Bicycle storage and racks](#)
- [Drinking fountains](#)
- [Fire extinguishers and alarms](#)
- [Litter bins](#)
- [Seating and tables](#)
- [Shade and shelter](#)
- [Landscape design](#)
- [Signage and wayfinding](#)
- [Lighting and contrasts](#)

Communication and information

- [Catering for assistance animals](#)
- [Websites](#)

4.9 Sport and recreation reserves

This section contains principles that can be interpreted and adapted to suit the outdoor recreation setting of sport and recreation reserves.

Outdoor and indoor sport and recreation settings vary considerably in their design, size, use and location, from the venue for a chess game, to a football ground.

This setting is described in terms of its role and use, outlining design principles to consider and to support use by everyone. Key requirements and key access dimensions for specific elements relating to facilities and installations are provided for design that will assist in maximising the effective use of all areas.

The key requirements have been developed as an easy to access checklist of issues to consider and the key access dimensions are based on the Australian Standards for Access and Mobility. While these Standards relate to the requirements of people with a range of access challenges and disabilities, they often generally improve access for all people.

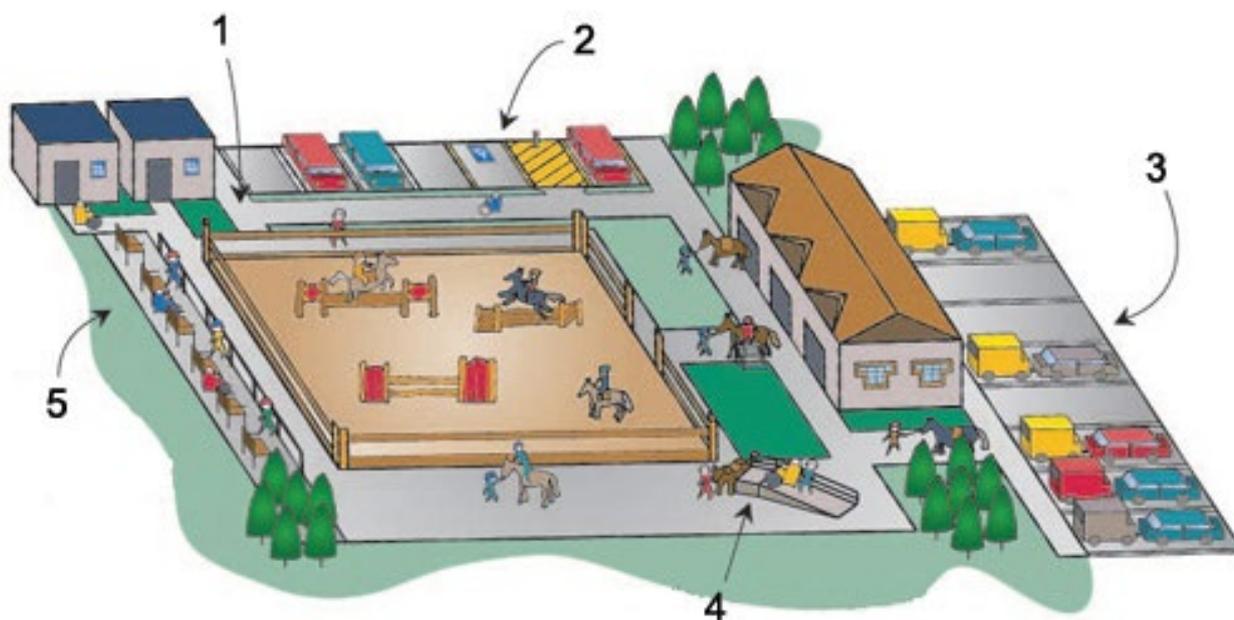
People use sport and recreation reserves for a variety of activities. These areas often incorporate sports grounds and clubs. Therefore a range of users including those undertaking recreation pursuits such as exercise or dog walking, as well as sports participants and spectators, staff and officials should all be catered for. There should be a continuous accessible path of travel from the point of arrival to viewing areas, club rooms, sports fields, stadiums, toilets and any other facilities.

Figure 48: An example of a sport and recreation setting with temporary facilities



1. Space required for officials of some sports to operate from the 'boundary' of the playing field or court
2. Adequate clear space around playing fields and courts is necessary in order to provide access and safety for players and spectators
3. Sports pavilions located on a continuous accessible path of travel from the car parking and pedestrian entry points of the recreation reserve or site
4. Appropriate numbers of accessible parking bays to be provided

Figure 49: An example of an equestrian setting



- | | | | | |
|--|--|--|---|--|
| <p>1. All elements within recreation reserves should be connected via a continuous accessible path of travel, for example car parking, toilets, buildings, fields of play, playspaces, drinking fountains, seating etc.</p> | <p>2. Appropriate numbers of accessible parking bays to be provided</p> | <p>3. Additional parking areas for long vehicles to be made available</p> | <p>4. Mounting areas that support the requirements of everyone need to be provided. Portable ramps and mounting hoists or lifts can also be used as an alternative to a permanent mounting fixture</p> | <p>5. Spectator areas for everyone should be provided at various locations at each facility where activities are held</p> |
|--|--|--|---|--|

Design Principles

The following key design principles should be considered when developing or upgrading sport and recreation reserves to support use by everyone.

Connections

All elements within sport and recreation reserves should be connected via a continuous accessible path of travel, for example, car parking, toilets, buildings, fields of play, playspaces, drinking fountains and seating. These elements should be linked so that anyone can easily move to and through all of them and participate in the activities and use the facilities provided.

Approach

Sport and recreation reserves require approach routes for both vehicles and pedestrians. These should be well signed with entry points that users can find easily. Use of environmental or architectural cues, a line of trees leading to the entry or similar structures that identify the entry points can assist.

Parking spaces for vehicles of various size and use, including cars, mini buses and bicycles should be provided in any onsite car parking area. Consideration should be given to vehicles with side and rear loading capacity for people who may be using mobility aids, as well as enough overhead clearance to load and upload items stored on a vehicle's roof.

Shade and shelter over some parking bays that may be used by people who take a little longer to enter or exit their vehicle are also useful. These bays should be located as close as possible to the principal entry points of the facilities provided. The ground surface of the parking area, particularly at designated accessible parking bays, should be level and free from loose material. Use of trees or shrubs that drop foliage or seed pods should be avoided.

An uninterrupted path of travel, free from any hazards or difficult or uneven terrain, should lead users from the car park to the entry points of the facilities.

Drop off areas that can cater for a variety of vehicles, for example, buses, taxis or cars, should also be provided as close as possible to principal entry points.

Entry points

Entry points should be easily identifiable and incorporate effective contrasts to the background area. Points of entry, including site, paths, fields of play and building entrances, should be wide enough to cater for the access needs of all users. This includes people who may be using mobility aids such as twin prams, scooters or wheelchairs and, for example, an adult with a child who is walking but who needs to be held by the hand, or a person with an assistance animal.

Consideration should also be given to the type and weight of any gates or doors that may need to be used to ensure they are not too heavy or difficult to operate.

Latches that can be used easily with one hand that are located at a low height for ease of use by a smaller person or someone using a wheelchair are important. Entry points that incorporate turnstiles, chicanes or queuing lines can be difficult for some people to manage and alternatives should be provided. Appropriate access through security gates, particularly during a temporary festival or event in the sport and recreation reserve, should also be considered.

Paths

Continuous, accessible paths of travel free from obstacles should be provided. They should incorporate alternatives to steps, be firm, stable and slip resistant, and avoid excessive slopes and crossfalls whenever possible.

Ramps with appropriate gradients, kerbs, handrails and landing and resting points should be provided where slopes cannot be avoided. Paths should incorporate clear lines of sight at key decision making points, as well as visible and textural indications of any hazards, particularly at any location where there may be a pedestrian and vehicle conflict.

Paths should be wide enough for people to easily pass each other when coming from opposite directions. The width of the pathway should be considered in light of the number of expected users, for example, in areas that attract many people, pathways should be wide enough to allow groups of people to pass each other, including users of a range of mobility aids such as prams, walking frames and wheelchairs.

Spectator areas

Spectator areas for everyone should be provided at various locations at each facility where activities are held.

Consideration should be given to locations that will cater for users of mobility aids such as prams, strollers, wheelchairs, scooters and assistance animals (animals that have been trained to perform tasks that assist people with disabilities) so people can sit with family and friends.

All spectator seating and areas must have clear lines of sight to any playing area, scoreboards and television monitors (wherever provided). Scoreboards should be easy to see and read from a long distance and incorporate audible alternatives.

Alternative scoring systems that assist people with hearing and vision limitations should also be provided. If a sound amplification system is provided, it should also be installed to assist spectators with a hearing impairment. Assistance hearing devices can be used with or instead of hearing devices.

Any spectator areas along paths should be designed so that people do not obstruct the path when stopping to view the activity. Spaces should be provided beside, but connected to, the path for effective use by everyone. A wider section of path or an extended area beside the path with a firm, level and slip-resistant surface should be available.

Consideration should be given to installing seating with backs and armrests at some of these locations with enough room for users of a range of mobility aids to sit off the pathway with other people.

Where areas are reserved for spectators viewing from vehicles, spaces should be provided for people who may not easily be able to get out of their vehicle or who require additional space to maneuver mobility aids when entering and exiting the vehicle.

The location of these spaces needs to be planned effectively and any vegetation and fencing designed accordingly. Fence height and construction are prime considerations.

Spectator areas that are installed above ground level, such as viewing platforms, should incorporate barrier-free access with kerbs, easy to grip handrails and safety barriers that are effective but don't impede the view, particularly for a smaller person, a child sitting in a stroller or a person sitting in a wheelchair.

Tiered spectator areas or scoring towers can be made easier to use by considering the gradient of ramps and the incorporation of easy to grip handrails and the design of stairs, including using colour luminance contrast on the stair treads. Firm, slip-resistant surface finishes, provision of seating and hooped handrails at the end of seating rows, as well as shade and drinking water at the top, will also assist many people to enjoy the experience.

Seating spaces should also be deep and wide enough to enable a person to feel safe from falling if in a tiered spectator area.

Lifts should be provided in structures that are designed for spectators to view activities from levels above the ground.

Landscape design

Landscape elements in sport and recreation reserves may include paths and garden beds, plants, trees and shrubs as well as statues, sculptures, water features and a variety of other landscape elements.

Consideration should be given to location, access, interpretation, usability and safety for everyone. Limitations to a person's mobility, vision and hearing as well as the interpretation needs of both children and adults should be taken into account in the design and access to these elements.

Key design issues to consider include:

- the selection and use of trees with foliage that does not overhang paths or playing areas and drop branches, seed pods, berries or bark, which can create barriers for all users
- use of landscaping design and elements to assist with wayfinding, for example:
- planting of shade trees and plants with different aromas and sounds that can assist users with wayfinding through the reserve as well as enhance the ambience of the space and create a sense of wellbeing;
- a large sculpture near the entry of a building or playing area that can act as a key wayfinding element to assist users to find their way to the entry point;
- consistent use of slightly textured paving, across a pathway to identify the direction to a viewing or seating area which assists people with limitations to vision, and other people when looking for somewhere to rest;
- easy to find and follow paths of travel created by the use of low growing plants along path edges, to features such as spectator areas, seating statues or other key elements;
- installation of sculptures and structures that can be 'felt' as well as 'seen';
- incorporating interesting seating designs, with backs and armrests, within landscape structures; and
- effective maintenance of sight lines, particularly in spectator areas, at key decision making points, isolated locations where personal safety could be compromised or any family use areas such as playspaces.

Installations

Installations such as litter bins, seating, lighting, drinking fountains (incorporating a low height dog bowl), dog dropping collection points and other installations must be usable by everyone. These should be located off, but connected to, a continuous, accessible path of travel. People should be able to easily approach, reach and use the installations.

All installations should incorporate low height, easy to use controls that can be reached by a smaller person. They should incorporate adequate leg clearance underneath to accommodate someone who is seated. Consideration of the angles of approach and clear space for a person to move around the installations is also important.

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Controls with large push buttons that protrude or extend beyond the surrounding surface or large levers are usually easier to use. Avoid any controls that require a person to use fine motor skills like 'one pointed finger' or that require a constant pressure to operate. The ability for one handed operation is preferred. Sensor operated controls that activate by sensing movement underneath or close to the installation also support ease of use.

The use of effective colour and luminance contrast to adjacent and background surfaces on installations and elements within installations will make them easier to identify and also assist with understanding how they are used.

Picnic and rest areas

Rest and picnic areas should include seating with backs and armrests and tables with extended ends or clear spaces to allow for a person using a wheelchair to move underneath or a person to clip on a child restraint.

Barbecues must be useable by everyone with controls at the front of the hotplate. This ensures they are easy to reach and eliminates the need for people to reach over the top of the hotplate.

A level benchtop next to the hotplate, made from glare-free, heat-resistant material, allows a person to move hot pans and other items easily on and off the hotplate without the need to lift heavy items.

Barbecues should be located off, but connected to, a continuous, accessible path of travel, as well as close to other important facilities such as toilets and playspaces.

Shade and shelter should be provided over some of these areas so that, depending on weather conditions, people can choose what will best suit their needs.

Where picnic and rest areas incorporate structures, such as a rotunda, there should be level or step-free access available as an alternative to stairs.

Companion animal free zones

While it is important for users of service or assistance animals (animals that have been trained to perform tasks that assist people with disabilities) to have equitable access to sport and recreation reserves, consideration should be given to areas where companion animals (pets) are restricted to leads. Older people and young children can become anxious when approached by free running companion animals that may trip or injure them. Some people will also have allergies to animals and will benefit from being able to use areas free from direct contact with companion animals.

Buildings

All buildings should be located on a continuous, accessible path of travel from the car parking and pedestrian entry points of the sport and recreation reserve.

They should provide level, step-free entry with no revolving doors or turnstiles and with wide door openings to accommodate all users, including people with mobility aids such as prams, strollers, wheelchairs or assistance animals. Self-opening doors are preferred, with effective contrasts across any glass doors or areas that could be mistaken for a doorway to ensure that the safety of users is not compromised.

Consideration should also be given to shelter close to, but not obstructing, the principal entries where some people may wish to store mobility aids while using the building.

Wide internal walkways and doorways, clear of any obstructions on the floor surface and walls, and areas to pass easily are important. Level and slip-resistant floor surfaces in both wet and dry conditions that do not incorporate any lips or tripping hazards should be maintained.

Access into each room of the building is necessary so that users can participate in all activities and use required facilities. Fixtures and fittings that can be accessed by a smaller person or a child, as well as someone who is seated, are necessary, for example, at customer service counters and information and display areas.

Adequate and accessible storage areas for court, coaching and maintenance equipment should be considered to meet the needs of facility users. Separate storage areas may be required where fuel operated equipment or chemicals are to be stored.

Any controls that are required to operate building elements, such as lights or doors, should be easy to grip, see, reach and operate and be supplemented with clear, concise instructions for use where necessary. These instructions should be provided in a range of formats, for example, written, audio and tactile, to ensure that all users can effectively interpret the information provided.

In multiple level buildings, either ramps with appropriate gradients or lifts should be provided to upper levels to support ease of use and movement. These should be easy to locate, with consideration given to the use of effective contrasts as well as raised tactile and Braille signage. Lifts should incorporate buttons that include raised tactile elements as well as Braille close to the buttons to support effective interpretation and wayfinding. Audio announcements should also be installed to identify floor levels.

Any stairs should incorporate effective contrast nosings on the stair treads. Stairs and ramps require easy to grip handrails and tactile ground surface indicators at the top and bottom.

Hearing augmentation should be provided in any buildings where people may meet, for example, in sports clubs or to begin a guided walk through the sport and recreation reserve or where there are interactive displays that people can listen to. Captions on screens for people who may have limitations to hearing, as well as audio or tactile alternatives for people who may have limitations to vision, should also be considered. Good lighting is necessary for all users.

Any buildings that incorporate kitchen or dining areas should provide ease of access for everyone and incorporate a range of tables and seating heights and types for children and adults. Tables with extended ends so a person using a wheelchair can move underneath, lower height or adjustable benches, leg clearances under fixtures such as sinks and benches and access to taps, cupboards and equipment should all be considered.

Toilets and change rooms

If toilets and change rooms are provided, they should be available for use by everyone. In addition to male and female areas, unisex accessible toilets, showers and change rooms are required as these can be effectively used by children as well as adults and carers, including people with a range of access challenges.

Key elements to consider include:

- located on a continuous accessible path of travel from the car parking and pedestrian entry points
- adequate room size and circulation space
- wide door opening, with a sliding door where possible
- easy to see and use door occupied indicator, handle and flushing control
- appropriate grab rails at the side and back of the toilet pan
- appropriate toilet pan distance from the side and rear wall
- toilet paper that is easily reached from the pan
- soap dispenser and hand dryer that are easily reached from the hand basin
- hand basin at an accessible height with appropriate leg clearance underneath
- baby change table where space allows
- adjustable height shower head
- non -slip shower seat with legs for support
- grab rails on walls of shower
- level, slip resistant floor surfaces in both wet and dry conditions
- adult change table with a hoist
- interconnecting change spaces with a lockable door in between
- facilities for both left and right handed users
- provision of ambulant accessible facilities that are useful for people who use mobility aids such as prams and strollers.

Playspaces

Access to playspaces for both children and adults is important. Play provides important motivation for children to become active, engage with others, extend themselves and adapt and learn skills. There are many physical, social, cognitive and emotional benefits that accrue from play.

Many people will be using mobility aids such as prams and strollers and others may also use wheelchairs, scooters or assistance animals. Many grandparents will accompany children to sporting activities held in sport and recreation reserves. Good access is important for everyone.

Seniors' playspaces are also becoming more relevant with the ageing of the population and the emergence of the baby boomers who are acutely aware of the need for exercise and outdoor activity.

Passive playspaces as well as play structures for climbing, balancing, hanging, running, swinging, rocking and rolling should all be considered. Access to and through each element are important and support both cognitive and social play experiences.

Some key elements of playspaces include:

- multipurpose play activities such as sand diggers, climbing equipment, ball courts, cubbies or swings
- interesting places or surfaces that suggest particular games or encourage activities such as rolling, hiding or running
- vegetation, sand or loose materials that invite building, collecting or creative imaginative play
- elements that provide acceptable risk, changes in surfaces and sensory elements that include tactile, audible and components with scent or smell
- maintenance of clear sightlines to assist with supervising children.

Infrastructure that supports users of playspaces such as direct access to toilets, drinking fountains, seats at various heights, shade and shelter over spectator areas is also important.

Water

The availability of drinking water for both people and animals is important. Children and adults as well as people using assistance animals will require access to drinking fountains, bowls or other ways of obtaining drinking water. Drinking fountains that are easy to reach, have large lever handles for operation and incorporate a low level drinking bowl for an assistance animal support access for everyone. A firm, slip-resistant surface around the installation to support access is also important.

Wayfinding and information

A successful wayfinding system should minimise anxiety and confusion, should be easy to understand and allow for everyone to equitably access all information provided. Wayfinding relies on a succession of communication clues provided throughout an environment. Clues may be visual, audible or tactile.

A visual wayfinding system incorporating cues such as architecture, landscape design, fountains, flagpoles, lighting, landmarks and other orientation points should be developed for the sport and recreation reserve.

Signage is also a critical key element of an effective wayfinding system. Signs and information about key features including walking trails, places of interest, interactive elements and components of the area, as well as the location of car parking, toilets and buildings, must be freely available in a range of formats so that people can prepare to enjoy the park or garden they are visiting.

Consideration should be given to 4 different types of signs:

- identification
- information
- directional
- safety or regulatory, prohibition and advisory.

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It is important to ensure that everyone can effectively interpret and use these different types of signage within the environment.

Accessible signage incorporates the positive elements of traditional signage as well as alternatives such as Braille and tactile and audio elements and gives consideration to a number of other key components that impact on accessibility and usability. When designing accessible signage, consideration should be given to the following:

- language
- location
- content
- typeface or font
- letter spacing
- size of letters
- appropriate symbols
- tactile and Braille
- contrast and colour
- illumination
- alternatives to traditional signage, for example, audio.

Signage incorporating the international symbol of access or deafness should be used to identify accessible elements where appropriate.

Lighting

Effective, glare-free lighting should be provided throughout areas that are likely to be used at night. This can include pathways, seating, building entrances and exits as well as areas that may pose a safety risk, such as at pedestrian and vehicle conflict areas, stairs and ramps.

Sports lighting should be designed and installed so that the sport being conducted can be comfortably performed by the participants and officials and viewed by spectators. Switches for sports lighting should be either operated by a key kept in a lockable enclosure or locked in a controlled area accessible to authorised persons only. Accessibility should be considered when locating lighting controls, for example, installing the switch at an appropriate height.

Fields of play

All fields of play should be connected by a continuous, accessible path of travel to other key elements within the sport and recreation reserve, such as car parking areas, toilets, sports pavilions and spectator areas.

Consideration should be given to fencing ball game areas, particularly at key locations such as behind scoring points. This reduces the need to chase balls outside the play area into what could be difficult or inaccessible terrain, as well as assisting in protecting spectators from injury.

Adjustable playing facilities

Basketball and netball goal posts, for example, that can be adjusted to various heights are important for children and wheelchair athletes. Portable ramps may be required at specific locations, for example, to bowling greens, where playing surfaces may be at different heights.

Adequate clear space around playing areas

Adequate clear space around playing fields and courts is necessary in order to provide access and safety for players and spectators. In addition, space will be required for officials of some sports to operate from the 'boundary' of the playing field or court, for example, football, soccer, rugby, netball, basketball and hockey.

Wider areas should be provided at these locations to ensure there is sufficient space for activities to be undertaken by a number of people including those who may be using mobility aids sporting equipment or providing first aid.

Appropriate equestrian facilities

Horse riding is a popular sport and many sport and recreation reserves are used by riders and some are specifically designed for this purpose. People need adequate room to move about in riding areas and stables, and spectators also need appropriate locations for viewing.

Mounting areas that support the requirements of everyone need to be provided. Some people will be able to mount a horse independently while others will need assistance from several helpers.

Mounting areas should be designed with platforms, changes in ground levels or movable equipment.

Two mounting blocks are commonly used. Helpers stand on either side of the blocks and someone leads the horse between the blocks. Steps up to the blocks are staggered so that at any time at least 2 of the helpers have a reasonably steady and firm footing.

Portable ramps and mounting hoists or lifts can also be used as an alternative to a permanent mounting fixture.

Hydraulic ramps are very useful and designs of these are constantly progressing to provide improved access for everyone.

When determining the most appropriate equipment to be installed, consideration should be given to the dignity of users as well as the suitability for the specific task, for example, the weight bearing capacity of the hoist as well as that of the horse is critical in order to avoid injury to both people and horses. For further information go to Rideability Victoria.

Emergency exit

Emergency exits should be provided along a continuous, accessible path of travel to a nominated assembly area from all rooms within a building or pathways within the reserve. Consideration must be given to all users including children, older adults and people using a range of aids such as prams, wheelchairs, hearing aids, assistance animals and white canes.

Fire extinguishers should be easy to reach for everyone and incorporate clear instructions for use.

Both visible and audible emergency alarms should be installed in buildings and around the reserve to assist all users, as well as a public address system for use by the fire service to assist in directing people along the most accessible path of travel given the building or site condition at any one time.

Emergency exits and paths of travel should be kept clear of obstructions at all times.

Equipment and other items stored in buildings should not create any barriers.

Evacuation maps should be installed at accessible heights, be easy to read and available in alternative formats to assist all building and site users. An emergency evacuation plan that addresses the needs of all building and site users should be developed and practised during evacuation drills.

Checklist of key elements

Consideration must be given to universal design in aquatic leisure centres relating to a wide range of key elements. In relation to aquatic leisure centres the key elements include:

Paths of travel

- [Approaches, onsite roadways and pedestrian crossings](#)
- [Tracks and pathways](#)
- [Ramps](#) and [Stairs](#)
- [Lifts \(passenger\)](#)
- [Floor and ground surfaces](#)

Entrances and exits

- [Boom gates and entry control points](#)
- [Entrances and doorways](#)
- [Fences, gates and bollards](#)
- [Baffles and screens](#)
- [Keys, keypads and padlocks](#)
- [Emergency Exits](#)

Car parking, set down and waiting

- [Car parking](#)
- [Set down and waiting areas](#)
- [Vehicle guardrails and wheel stops](#)

Building and facilities

- [All buildings](#)
- [Internal corridors](#)
- [Kitchens](#)
- [Multipurpose rooms](#)
- [First aid rooms](#)
- [Retail areas](#)
- [Scoring areas](#)
- [Spectator and viewing areas](#)

Toilets, showers and change rooms

- [Toilets - Accessible, ambulant and portable](#)
- [Adult assisted change areas](#)
- [Baby change areas](#)
- [Family change areas](#)
- [Showers](#)

Communication and information

- [Catering for assistance animals](#)
- [Websites](#)

Installations

- [All installations](#)
- [Barbecues](#)
- [Bicycle storage and racks](#)
- [Drinking fountains](#)
- [Fire extinguishers and alarms](#)
- [Litter bins](#)
- [Seating and tables](#)
- [Shade and shelter](#)
- [Landscape design](#)
- [Signage and wayfinding](#)
- [Lighting and contrasts](#)

Specialist recreation elements

- [Temporary facilities](#)

5.



Legislation

The law explicitly recognises the right of everyone to participate in sport and recreation.

The law explicitly recognises the right of everyone to participate in sport and recreation. This has occurred principally through anti-discrimination legislation, planning ordinances, building codes and other standards applying to the design of facilities. While there are no legislation or Standards relating to universal design, this section provides some guidance on the minimum legal requirements in respect of access to buildings and facilities in sport and recreation settings. Planners, designers and developers of sport and recreation facilities need to be aware of and adhere as a minimum to these requirements.

The introduction of the Disability (Access to Premises – Buildings) Standards 2010 means that all new and refurbished buildings and facilities in Australia are now required to provide prescribed minimum levels of access for users. There are some exemptions and concessions for some elements of some buildings. This guide is not a complete, detailed design guide; the Disability (Access to Premises – Buildings) Standards 2010 should be referred to prior to undertaking any building design or works.

These Standards do not cover requirements for all buildings or all parts of all buildings and are primarily based on the needs of users with a disability, not on the principles of universal design, but they will assist in enhancing the use of buildings by many users.

It is important to understand that while minimum requirements are important, they only provide the base level starting point for effective access to many buildings and facilities. The principles of universal design should be incorporated to ensure participation by everyone in facilities.

5.1 Limitations of legislation and regulations

While there is a range of regulations about access to buildings, there are few controls that relate to the design of features in the external environment in the provision of access for all users. It is imperative, therefore, that planners and designers of sport and recreation facilities are familiar with the principles of universal design, as well as other relevant guidelines, and assume responsibility for fully and sensitively providing access to everyone.

Planners and designers often interpret legislation and regulations as ‘preferred standards’ rather than ‘minimum provisions’. Regulatory requirements are generally very basic and are intended to cater for minimum requirements of specific users.

They are not, and should never be seen as, ‘ideal’ or preferred for everyone.

There are numerous examples of buildings that technically conform to the regulations but remain, in reality, inaccessible to many people.

Finally, regulations are primarily relevant in public facilities where the precise characteristics and capabilities of potential users are unknown and in any case can vary considerably. It is therefore important to provide an environment that caters for a wide range of needs, rather than the minimum required by legislation.

The following provides some guidance on the legal requirements for access to buildings and facilities:

- Disability Discrimination Act 1992 (DDA)
- Disability (Access to Premises - Buildings) Standards 2010
- Building Code of Australia
- Planning Ordinances
- Australian Standards.

Disability Discrimination Act 1992 (DDA)

Coverage of the Disability Discrimination Act.

The DDA provides uniform protection against unfair or unfavourable treatment of people with a disability in Australia. The key principles in relation to buildings and facilities are based around the provision of equitable, dignified access.

The DDA became operational in 1993 and makes it unlawful to discriminate on the basis of disability in the following areas:

- public footpaths and walkways
- educational institutions
- shops and department stores
- banks, credit unions, building societies
- parks, public swimming pools, public toilets and pedestrian malls
- cafes, restaurants, pubs
- theatres and other places of entertainment
- lawyers' offices and legal services
- libraries
- sporting venues
- social and sporting clubs
- government offices and government-run services.
- public transport including trains, buses, ferries, boats, ships and planes
- hospitals, dentists' and doctors' surgeries
- hairdressers and beauty salons
- travel agents

Sport and recreation services and facilities fall under the umbrella of the DDA legislation and as such, asset owners and facility managers are expected to comply with its provisions.

Definition of disability

The DDA provides a very broad definition of disability and includes:

- physical disability
- intellectual disability
- psychiatric disability
- sensory disability
- neurological disability
- learning disabilities
- physical disfigurement
- the presence in the body of disease-causing organisms.

The DDA's scope also covers:

- disabilities which have existed in the past, but no longer exist
- disabilities which may exist in the future
- disabilities which might be imputed to a person.

Under the DDA it is also unlawful to discriminate against a person on the grounds of being an associate of a person with a disability, such as a carer, spouse, relative, person living with someone on a genuine domestic basis or someone in a business, sporting or recreational relationship.

Therefore, it is important that all sport and recreation facilities provide equitable, dignified access for all users. Adopting a universally designed approach will support the objectives of the DDA and enhance use by everyone.

Further information

[Australian Human Rights Commission](#)

The DDA and facility design

Disability (Access to Premises – Buildings) Standards 2010

On 15 March 2010, the Disability (Access to Premises - Buildings) Standards 2010 were tabled in federal parliament. These Standards were made under subsection 31(1) of the DDA with the following aims to:

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

- 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 those Standards will not be unlawful under the DDA.

These are the mandatory standards that must be taken into consideration in the design and development of all new and upgraded buildings, including sport and recreation facilities. However, like most standards in Australia, these provide minimum design requirements and dimensions only. Working towards universal design not only incorporates the use of minimum standards, but in many instances identifies the key considerations to enhance the effective use of buildings and facilities by all people. An amendment to the Disability (Access to Premises – Buildings) Standards 2010 was issued on 22 September 2010.

Further information

[Attorney General's Department](#)

Building Code of Australia (BCA)

The BCA provides uniform building requirements throughout the nation, replacing the need for individual state and territory regulation.

States and territories, from time to time, amend the BCA by means of variations in the BCA appendix or one off modifications granted by the Building Appeals Board to cater for certain situations. These amendments should be checked carefully to ensure that particular state or territory requirements do not inadvertently promote less accessible environments. The Disability (Access to Premises – Buildings) Standards 2010 was introduced on 1 May 2011 in line with an updated BCA.

These will take primacy over any state or territory requirements or amendments.

Like all regulatory documents, the BCA is continually revised and should be checked to ensure the latest updates are referred to and used in all building works.

Regulations catering for access (for people with a disability)

Within the BCA, specific relevance is made to Access for People with Disabilities (part D3). These requirements apply to most classes of buildings, (with particular exemptions and concessions), including:

Class 1b Buildings

Class 1b buildings include short-term holiday accommodation, boarding houses, bed and breakfast, guest houses and hostels.

Class 2 Buildings

Class 2 buildings include buildings containing 2 or more sole occupancy units each being a separate dwelling.

Class 3 Buildings

Class 3 buildings include residential buildings (other than class 1 or 2 buildings), for example, lodging houses, backpacker's accommodation, the residential part of a hotel or motel, the residential part of a school, accommodation for the aged, people with disabilities, children, the residential part of a health-care facility accommodating staff or a residential part of a detention centre.

Class 5 Buildings

Class 5 buildings include office buildings used for professional or commercial purposes (excluding Class 6, 7, 8, or 9 buildings).

Class 6 Buildings

Class 6 buildings include shops or other public retail premises such as cafes, restaurants, hairdressers, laundry, undertakers, markets, sale rooms, show rooms and service stations.

Class 7 Buildings

Class 7 buildings include public car parks, buildings for storage or display of goods or produce for sale by wholesale.

Class 8 Buildings

Class 8 buildings include laboratories and factories.

Class 9 Buildings

Class 9 buildings include health-care buildings, assembly buildings, trade workshops, laboratories which are part of schools and health care buildings.

Class 10 Buildings

Class 10 buildings include non-habitable structures such as private garages, carports, sheds and swimming pools.

BCA requirements state that people with a disability must have access to and within buildings required to be accessible by means of an accessway. All provisions must be in accordance with the requirements of Australian Standard (AS) 1428.

While the BCA requirements deal specifically with buildings (rather than outdoor facilities), they require that access be provided from the road boundary, from any accessible car-parking space or from any other associated building required to be accessible on the allotment.

The space between buildings is the continuous circulation path, and although not regulated by the BCA, must be accessible and free of barriers and hazards.

Accessing car-parking facilities is also outlined in the BCA under Part D3.

Requirements for providing sanitary facilities for people with a disability are described in the BCA Part F2.

Further information

[Australian Building Codes Board](#)

Planning ordinances

Planning ordinances are requirements that have great potential for enhancing access to sporting and recreation facilities, both indoor and outdoor.

Planning regulations create a framework for the design and development of the built environment taking into account infrastructure, urban density, neighbourhood character, site landscaping, energy efficiency, visual and acoustic privacy, the building envelope, parking and vehicular access, access for pedestrians, private and communal open space and site facilities.

State and local government planners check if development proposals conform to these guidelines and produce the desired outcomes before recommending that planning permits be granted either outright or conditionally. In addition, there are requirements that if proposals are not 'as of right', neighbouring owners and occupiers must be notified. They then have rights to object or appeal if they feel the proposed development is not in keeping with the ordinances and will adversely affect the amenity of the area.

Australian Standards

Standards Australia has a suite of standards, AS 1428 'Design for Access and Mobility', which relates specifically to the needs of people with a disability. These are detailed technical documents developed for Standards Australia by expert working parties drawn from industry and government agencies as well as individuals with specific expertise. These standards may be periodically amended, and attention must be given to all relevant updates.

A number of these standards are referenced by the Disability (Access to Premises – Buildings) Standards 2010 and must be adhered to as a minimum in the design of new and upgraded buildings. Many of the requirements and recommendations of these Standards are also equally relevant to many other building and facility users. For example:

- aligning light switches with door handles makes them easier to find in the dark
- rocker action switches can be used with an elbow when hands are full
- ramps in conjunction with steps, facilitate deliveries and removals as well as people using personal mobility aids such as wheelchairs, prams or shopping trolleys.

Currently AS 1428 'Design for Access and Mobility' comprises the following 5 parts.

Part 1: AS1428.1 2009 General Requirements for Access – New building work

This standard specifies the design requirements of new building work, as required by the BCA and the Disability (Access to Premises – Buildings) Standards, to provide access for people with a disability. Particular attention is given to:

- continuous accessible paths of travel and circulation spaces for people who use wheelchairs
- access and facilities for people with ambulatory disability
- access for people with sensory disability.

AS1428.1 2001 should also be referred to in the upgrade of buildings, in terms of minimum requirements, as it relates to unisex accessible toilets that may be exempt from upgrade to the larger dimensions specified in AS1428.1 2009 in accordance with the Disability (Access to Premises – Buildings) Standards 2010.

Part 2: AS1428.2 1992 Enhanced and Additional Requirements - Buildings and Facilities

Under this section of the standard, provisions are advisory only and should be used where a better level of access is required, or where many people with a disability use the facility. Some dimensional requirements of this standard are now incorporated within AS1428.1-2009. In general the dimensions are larger, allowing access for a greater number of people wishing to effectively use the building or facility. This Standard will assist in determining some dimensions of a universally designed approach to building development and fit-out requirements, but nevertheless is still based on the needs of people with a disability, rather than all users.

Part 3: AS1428.3 1992 Requirements for Children and Adolescents with Physical Disabilities

This section is also advisory, and is intended for facilities primarily used by children, including playspaces, schools, child-care centres, information centres, museums and children's libraries, parks and gardens.

This standard has not been updated since 1993. This standard was made obsolescent on 18 June 2012. Where appropriate, it can be used for reference purposes.

Part 4: AS/NZS1428. 4.1 Means to assist the orientation of people with vision impairment - Tactile Ground Surface Indicators

Some sections of this standard are mandatory, in accordance with the Disability (Access to Premises – Buildings) Standards 2010. It is intended to provide tactile and luminance and colour contrasting surfaces for people with vision impairment. It is particularly useful in outdoor areas and is intended to assist people with vision impairment to navigate independently. If installed correctly and maintained appropriately, the tactile elements do not disadvantage other users, and can in fact alert all users to safe routes and to potential hazards, such as stairs, the edge of a jetty or a sudden and dangerous change in level.

Part 5: AS1428.5 – 2010 Communication for people who are deaf or hearing impaired

This section is advisory and addresses the principles to consider when providing facilities for people who are deaf or hearing impaired, particularly regarding assistive listening devices and communication systems.

In addition to the AS 1428 suite of Australian Standards for Access and Mobility, a number of other Australian Standards are also relevant to particular access elements of buildings and facilities. These include:

- AS/NZ 2890.6 – 2009 parking facilities – This Standard specifies the minimum requirements for the provision of off-street parking facilities for people with disabilities

- AS 1735 – various parts and dates - specifies requirements for lifts, escalators and moving walks. There are a number of different parts to this suite of Standards that provide specifications relating to specific types of lifts and pedestrian conveyances.

There are also numerous other relevant Australian Standards covering specific issues such as playspace areas and equipment, lighting and floor coverings.

Standards are constantly under review, so it is important to check that you are using the most recent issue at all times.

For further information or to purchase Australian Standards, go to [Standards Australia](#).

6.



Links to other relevant information

[Universal Design Fact Sheet \(docx, 122.28 KB\)](#) - A summary of the principles of Universal Design.

[Be Prepared \(pdf, 6.76 MB\)](#) - Sport and active recreation programs provide unique opportunities for people with disabilities to explore their potential and focus on their ability. This resource kit has been prepared for volunteers and staff who play an important role in the provision of quality sport and active recreation experiences for people with disabilities.

[Universal Design Integrating the Principles into Camp Activities \(pdf, 1.92 MB\)](#) - This paper outlines the importance of Universal Design, and ways in which environments, activities and programs within camps can be used and experienced by people of all ages and abilities.

[Universal Design, Camps and Consultation \(pdf, 2.49 MB\)](#) - This report presents findings from the literature regarding the best practice methods for consulting with users to implement Universal Design. This is part of a larger body of work to assist Sport and Recreation Victoria to implement Universal Design across their recreation camps with the aim of increasing the participation of a wider range of users. Universal Design is a design process that aims to ensure that products, services and the built environment are useable by the widest range of users (Vanderheiden 1996). It is not only about people with disabilities but full participation for all.

These guidelines are subject to changes at the discretion of the Minister for Community Sport.

Authorised and published by the Victorian Government, 1 Spring Street, Melbourne.

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Available at Sport and Recreation Victoria's [website](#)