THE UNIVERSITY of EDINBURGH

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DISABILITY ACCESS STANDARDS

Contents

1. Introduction and Project Procedures

These Disability Access Standards provide guidance for consultants and University staff engaged on all new University projects including Major Projects, Small Projects, Minor Works, Statutory Compliance Works, Major Replacements and Maintenance Projects. Details of existing provision throughout the estate can be found in the Disability Audit .

The following project procedures are to be followed:

- Heads of Department / School are to be consulted at the preliminary stages of projects to establish whether the project must accommodate any existing staff members or students with a disability.

- A cross reference to the guidelines should be included in project briefing documents and consultants appointments.

- The agenda for preliminary project meetings and any project reviews is to include a section for disability.

- The University Fire Officer should be consulted at an early stage regarding any work to existing buildings to advise on any implications arising from the Fire Risk Assessment for the building, and impact on **Personal Emergency Evacuation Plans**.

- Any conflicts between the guidelines and other legislation, e.g. Planning, should be discussed with the Project Manager/Project Leader.
  External consultants will pass to the University Design Office the floor plans of proposed new and existing building refurbishments for comment relating to Disability compliance with the university policies

Relationship to other guidance
The guidance incorporates the general requirements on access set out in the Building Standards. Additional guidance can be found in the following documents:-

Disability Scotland- Access guide
Guidance on the use of tactile paving surfaces Scottish Office/DETR 1998

DDA
Compliance with the Equality Act 2010 includes an analysis of a complex set of factors and is not merely a matter of building standards. There are separate standards for public service providers, employers and educational institutions.

Different levels of access will be possible for existing buildings and new build, and in the case of listed buildings, the character and historic interest of the building must be taken into account when planning adaptations. Consultation with an access consultant may be desirable when developing an access strategy for compliance with the Equality Act 2010
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2. External Arrangements

Pre-arrival information - All pre-arrival information should include reference to the accessible route and entrance to each campus building. Leaflets should avoid non-specific statements e.g. 'limited access' and should outline specific access difficulties in each building. It should identify a contact point for help at specific buildings.

By own car - An accessible parking bay should be provided where accessible entrances are located.

Parking bay design criteria - All parking bays should be designed to following criteria:- Bays will generally be allocated on an as-needed basis, but in large public parking areas 5% of total parking bays is a recognised standard, although statistics suggest less than 5% may be required. Individual parking requirements may vary and 5% is only a guide.

Bays should be not more than 45m from the principal entrance to the building.

Bays should be clearly marked with International Disability Symbol, i.e. wheelchair symbol, with both markings on the road and a sign at drivers eye-level.

Bays should be positioned so the wheelchair users can reach a dropped kerb.

2.4m x 4.8m with 1.2m wide transfer zone adjacent is the most common size for an accessible parking bay. The transfer zone may be shared between two spaces.

Where parking payments are required, there should be level access to ticket machines, clearly displayed pricing and machine controls mounted between 900mm and 1.2m height.

Car parking areas should not have barriers unless necessary as these can be difficult to negotiate. If a barrier is necessary, there should be a help button linked to a reception point to give assistance.

A drop-off bay/set down point is desirable within main entrance points.

2.4m x 4.8m bay with 1.2m wide transfer zone adjacent or 6.0m long bay are the most common sizes for an accessible drop-off bay, but these dimensions could vary within different local authority areas.

Dropped kerbs and tactile strips should be to DETR requirements.

3. Route to entrance

The route to the entrance should be straightforward with the entrance clearly visible.

Design Criteria - Detailed criteria for ramps and external steps are given in more detail in section 13. This follows the basic criteria set out in the Building Standards.

The basic dimension criteria follow:-

1.2m wide for most of its length, with the minimum width of 900mm.

1:15 gradient with landings every 10m, the minimum standard is 1 in12 with landings every 5m.

Handrails to all ramps with a gradient of more than 1:20.

Surfaces should be firm, non-slip and non-reflective, clearly delineated by different colour, surface or other markings. Free from tripping hazards, obstacles, level gratings, no overhanging features.

Lighting - the entrance route should be lit to 100 lux.

Crossings en route - Every vehicular crossing en route should have dropped kerbs and tactile surfaces to DETR requirements. There may be scope to use raised tables to give a level crossing across routes where pedestrian use dominates.

Entrance signing - The building name or address sign should be easily understood. Positioned near the entrance, between 900-1.2m height above floor level.

4. Entrances

Main entrance
All new buildings should have one entrance for all people, which does not present a barrier for students and staff with disabilities to use unaided.

Secondary adapted entrance
Where the entrance door to an existing building is not accessible, a secondary entrance for staff and students is acceptable.

Entrance criteria
Main and adapted entrances should conform to the following criteria.

The entrance door should be obvious and, if set within a glazed screen, it should have a contrasting frame for identification by people with vision impairment and clear manifestation for visually impaired people. The manifestation proposals should be to the approval of an Edinburgh University Project Manager.

The objective is to design a door which is operable independently by a disabled person using a variety of mobility aids, including sticks or a wheelchair. A positive improvement would be to increase the clear width to 850mm to 900mm to accommodate motorised scooters and electric wheelchairs. This exceeds the Building Standards recommended clear width of 800mm.

Automatic side sliding doors are preferred to revolving doors which people using mobility aids cannot use. If a revolving door is necessary there must be a pass door which is kept unlocked during normal business hours.

Doors should have a clear glazed panel or panels giving a zone of visibility from a height of not more than 900mm to at least 1.5 metres above finished floor level.

Entrance doors should have 800mm clear width opening when a single leaf door, or one leaf of double doors is open. If the door clear width is less than 750mm it should be operated by an automatic device In any case where the door will not be automated and the clear width is less an 750mm, a help bell at max. 1.4m with sign should be positioned so the user can summon assistance.

The door should have suitable space for a wheelchair user to open it independently, e.g. a 300mm offset at leading edge of door, which will allow the door to swing open freely without being obstructed by the wheelchair.

There should be a level landing outside the entrance door.

Thresholds should be level.

When a wheelchair user approaches a door circulation space is necessary on both sides of the door to allow a wheelchair to operate. Lobby dimensions vary depending on door swing and position. Lobbies must be sized to permit a wheelchair user to move clear of one door before using the next; allow for someone assisting a wheelchair user; permit an ambulant person to pass.
A quick reference is that there should be a clear space of 1.2m free of the door swing forward and behind.

Special considerations apply when both doors open **into** the lobby. The clear width between door frames should be larger at 2.3m. Detailed guidance is set out in the Disability Scotland access guide.

Ironmongery should contrast with door colour

Door handles should be easy to grip i.e. tubular profile of 45-55mm diameter.

Door handles should be mounted below 1.04m

Door handles should be lever action type rather than knob

Force needed to open a door with a door closer should be suitable, i.e. below 30N. This can usually be done with adjusting closers. Imagine the user not having use of his or her hands and limited upper body strength, and pushing with a side arm.

The doormat should be close fitting, flush with adjacent floors and firm i.e. not coir, or with a deep pile.

Refer to drawing of lobbies from Section 4.2.4 of The Scottish Building Standards.

5. Reception

At all reception/servitor points there should be at least one section of lowered counter at a height between 750mm-850mm.

The preferred practice is to adopt a single lower height counter at a max height of 900mm.

A kneehole space should be designed to allow a wheelchair to pull up to the counter.

An induction loop, with international symbol should be available at all reception points.

At important reception points, where waiting areas are provided, there should be accessible seating areas. They should be designed to the following criteria:-

Space for wheelchairs (1.5m x 1.5m). Sufficient

circulation space 1.2m gangways. Seating

shouldhave backrests and arm supports.

Where a public telephone is provided one phone should be at a low level, i.e. with buttons and controls between 900 and 1.2m.

Phone should be equipped with an audio coupler, and a sign to identifying this facility. Best practice is to provide a text phone.

The RNIB has produced guidance on signs and reference is made to the RNIB publication Building Sight.

The signage strategy should be:-

Easily understood (not too many unfamiliar pictograms) and be of consistent style in a suitable text font and size.

Sufficiently illuminated at day and night.

Braille should only be used to supplement raised lettering.

6. Lecture theatres

Access
The access route from the building entrance to the lecture theatre should be level or ramped. Where there is a change of floor level there should be a passenger lift.

People with walking difficulties should also be accommodated in lecture theatres which have tiered seating by providing a level of seating that does not require the use of steps.

At least one access gangway to seating should be 900mm wide minimum. Steps and changes of level should have handrails and contrasting non-slip nosings.

Seating
Wheelchair spaces should be provided at the front and rear to all new lecture theatres. Wheelchair users can interfere with sight lines so it will be necessary to consider the impact of wheelchair seating on sight lines for front spaces. Wheelchair spaces should wherever possible, be within the main seating area and not in a location which could detract from the lecture presentation.

Wheelchair space should be 900mm wide x 1.4 deep. There should be a seat adjacent which can be used by an assistant or attendant to the student, and which is required for use by a companion, in the social context, where the venue is open for public performances, conferences.

Some seats should be provided with arms and some without, and the seat should be at between 400 and 500mm height.

Podium
Access for the speaker should also be considered. If it is not possible to provide level or ramped access to the podium an alternative position from where a lecture can be given should be provided. This position should allow access to the controls of the same audio-visual facilities, e.g. overhead projectors etc.

A wheelchair speaker usually cannot use fixed standing-level lecterns so it is preferable to not position fixed lecterns.

Hearing enhancement facilities
Fixed or portable induction loop/s should be available for use for use in lecture theatres and other teaching/seminar rooms.

The International symbol for induction loop and current maintenance certificate should be displayed in a prominent position and all staff and lecturers should be trained in the use of the equipment.

7. Laboratories

University Policy is to design individual laboratories for staff or students with disabilities according to individual needs. The following list of considerations should be consulted with planning individual adaptations.

Access
The access route from the building entrance to the laboratories should be level or ramped (See entrance criteria in section 3). Where there is a change of floor level there should be a passenger lift. Corridors, doors and other circulation routes should comply with recommendations in section 12.

Bench design
An adjustable height bench with the main facilities, e.g. sink, electrical, gas or other fixed supply should be installed in each laboratory (800mm is an optimum height for a wheelchair user to work at). On this bench there should be sufficient space for equipment to be set up and used by a wheelchair user or someone in a seated position. It is not recommended to provide lowered working benches for everyone, as many people to prefer to stand in laboratories.

An unobstructed area 1.4m x 1.4m is required in front of the bench to allow a wheelchair user to manoeuvre into position.

Working benches should have a kneehole space 600mm deep to enable a wheelchair user to pull right up to the bench and reach all equipment.

Supply taps for water, electrical, gas should be fixed no further back than 600mm.

Storage
Commonly used items should be stored in cupboards or shelves at a height between 400 and 1.2m above floor level.

Switches
Switches should be mounted between 400 and 1.2m above floor level and at least 350mm away from the corner of a room, to allow a wheelchair user to reach them.

Emergency alarm/telephone link
The fire alarm pull switch and telephone point in the room should also be positioned between 900-1200mm if it used by students and staff.

In labs where there is a risk of injury from work, consideration should be given to the position of an emergency pull alarm at the accessible workstation similar to the type found in adapted WCs which is connected to the security or servitor point. The alarm should also have an audible sound to alert attention to passers-by.

8. Libraries

Access
The access route from the building entrance to the library should be level or ramped. Where there is a change of floor level there should be a passenger lift. Corridors, doors and other circulation routes should comply with recommendations in section 13.

Library check-in and checkout desks
There should be at least one section of lowered counter at a height between 750mm-850mm. A kneehole space should be designed to allow a wheelchair to pull up to the counter.

The minimum width for automatic barriers should be 1.2m.

Hearing enhancement facilities
An induction loop, with international symbol should be available at all service points.

Cataloguing and computer terminals
Computer cataloguing systems should be sited on desks at 750mm-850mm height.

At least one computer terminal should have software which enlarges text size for people with limited sight. This facility should be clearly signed.

Bookshelves
Most books and journals should be on shelves at a height between 400 and 1.3m. Staff should be available to help disabled people who cannot reach books at a higher level.

Care should be taken when designing the lighting in the bookshelf areas to ensure there are adequate levels of illumination for people with limited sight**.**

Reading Desks
Accessible reading desks should be at 750mm-850mm height, with a 1400x 1400mm space adjacent for manoeuvring a wheelchair.
Task lighting should be installed over each reading desk.

9. Performance spaces

Access
The access route to performance and back stage areas should be level or ramped. Where there is a change of floor level there should be a passenger lift. Corridors, doors and other circulation routes should comply with recommendations in section 13.

WCs
At least one unisex accessible WC should be located in the back stage area for use by performers.

Changing facilities
Changing rooms should be provided for men and women, which are large enough to accommodate the anticipated numbers of performers, including wheelchair users.

Accessible showers should have level floors and have sufficient space for easy circulation.

Backstage and technical equipment
Disabled people are often keen to be involved in theatrical productions in back stage roles. Ensuring the backstage equipment is accessible will allow use by many disabled people.

Circulation routes within the backstage areas should be 1.2m wide where possible.

Control desks should be in an accessible location, or have the facility to have a remote desk which can be used by disabled people.

Audience and spectator fixed seating
In an accessible storey which contains fixed seating for spectators, or an audience, accessible level spaces for wheelchair users should be provided as follows:

Spaces to be 900mm x 1.4m

Dispersed among the remainder of the seating

Enable wheelchair users to be located next to able-bodied or disabled companions

Arranged to avoid the extra height of wheelchair users obstructing sight lines

Kept clear specifically for wheelchair users or fitted with seating that can be readily removed if the space is required for a wheelchair user

There should be a minimum of 2 wheelchair spaces where capacity is up to 200, plus 1 for every extra 100 seats

Hearing enhancement facilities
Fixed or portable induction loop/s should be available for use for use in auditoria.

The International symbol for induction loop and current maintenance certificate should be displayed in a prominent position and all staff and lecturers should be trained in the use of the equipment.

10. Sports facilities

Access
At least one accessible parking bay should be provided adjacent to the entrance to sports facilities.

The access route to sports facilities should be level or ramped. Where there is a change of floor level there should be a passenger lift.

Corridors and other circulation routes within the sport centre should comply with recommendations in section 13.

Sports-use wheelchairs can have a wider wheelchair base: the preferred doors should be configured as a 1½ door giving 900mm clearance to accommodate wider sports wheelchairs.

Changing rooms and showers
At least one unisex accessible changing room should be provided with a WC cubicle attached.

Accessible showers should have level floors and have sufficient space for easy circulation as shown in drawing.

Specialist aids
The installation of some specialist aids for disabled people, e.g. swimming pool lifting devices should be provided.

Audience and spectator seating
See criteria in section 8

[Drawing of shower available]

11. Catering facilities

People with disabilities should be able to use catering facilities alone or with a companion, and should have access to all self-service facilities available to other users of the facility.

Access

The access route from the building entrance to the restaurant, cafes or bar should be level or ramped. Where there is a change of floor level there should be a passenger lift. For corridors, doors and other circulation routes see section 13.

At least one unisex accessible WC cubicle should be easily accessible from the catering facilities.

Self-service counters

Ensure that built-in fittings allow adequate circulation space for wheelchair users and ambulant disabled people.

Counters should be at 800mm height, with a kneehole space under to allow a wheelchair user to reach the display.

Displayed items on the counter should be no further back than 600mm from the counter front.

Items on shelves or in freezers should be no lower than 400mm or above 1.3m above floor level

Bars should have a lowered section at 750- 850mm and the displays on the bar should not obstruct eye contact between staff and a customer in a seated position.

Payment points

At all payment points there should be at least one section of lowered counter at a height between 750mm-850mm.

Hearing enhancement facilities

An induction loop, with international symbol should be available at all service points.

Chairs and tables

If the layout has fixed seating in alcoves, it should be designed so that wheelchairs users can also sit at some tables. Loose chairs and tables can easily be rearranged to accommodate wheelchair users.

Tables should have a kneehole space under and not obstruct wheelchair manoeuvring, e.g. small tables with corner legs.
Some chairs should be provided with arms and some without.

Floor finishes can provide a helpful contrast between seating and circulation areas, and should be of a surface described in section 13.

Menus and signs

Table menus should be available in large print. Wall mounted menus and signs should be mounted between 1.05m to 1.9m and have no obstructions in front, so a person with a limited vision can stand close to the menu to read it. Text font should not be less than in

25mm high and should be of sufficient contrast with the background.

12. Residential accommodation

University Policy is to design individual residential requirements for staff or students with disabilities according to individual needs. The following list of considerations should be consulted with planning individual adaptations.

Access
To facilitate integration of disabled students, all new student accommodation should, where practicable have a level entrance and an adapted WC for use on the ground floor.

Accessible accommodation
An accessible parking bay should be provided adjacent to the entrance of the accommodation.

Entrance approach and entrance door should be designed to standards laid out in sections 1,2 and 3.

The inner lobby of the flat should be designed to allow a wheelchair 1500mm turning radius.

Internal doors should ideally allow 850mm clear width opening. Furniture layouts should be carefully considered to allow adequate turning circles in lounges and bedrooms.

Bathroom
Optimum size to accommodate WC, wash hand basin and flush shower area with 1500mm wheelchair turning circle is 2100x 1700mm.

Basin and bath should have lever taps for ease of use by people with limited dexterity.

A pull cord should operate light switch.

Emergency alarm connected to security or the servitor operated by a pull cord should be installed to allow an independent disabled person call for assistance if required

Kitchen
Adjustable height worktops with sink, hob and preparation area should be installed.

An unobstructed area 1400 x 1400mm is required in front of the worktops to allow wheelchair user to manoeuvre into position.

Worktops should have kneehole spaces 600mm deep to enable a wheelchair user to pull right up and use the whole width of the worktop.

Storage
Commonly used items should be stored in cupboards or on shelves at a height between 400 and 1350mm above floor level.

Switches
Switches should be mounted between 400 and 1.4m above floor level and at least 350mm away from the corner of a room, to allow a wheelchair user to reach them.

13. WCs

Disabled person's WC
At least one designated wheelchair accessible WC should be provided for use in each building.

The layout of the WC, hand basin and grab rail relationships is to allow for forward and side transfer and to allow for hand washing while on the WC before re-transferring to the wheelchair.
The disabled person's WC should be based on the requirement for a peninsula unit (allowing transfer from each side). Proprietary swing WHB's are available to allow full access from the WC. A room size of 2270 x 2400 will accommodate a standard wheelchair and peninsular unit. (see appendix)

A disabled WC and any ambulant cubicle should incorporate a WC at a higher level than normal. The seat should be at a height above floor level of 480mm.

A paper tissue dispenser is to be used, as opposed to toilet paper

Drop down rails should be friction hinge design.

Room size
Experience has shown that the minimum room requirements do not usually accommodate an electric wheelchair. The minimum room size 1.75 x 1.4m where WC is being added to existing space.

A room size of 2.4x 2.5m will allow for most electric wheelchairs. The standard or average room size is 1.5 x 2.0m

The cubicle should be unisex, so a helper of the opposite sex can enter.

Outward opening door which gives a minimum of 900 mm clear width (1000mm door set).

If the door swings inwards, the cubicle size should give clear 1500mm turning circle for wheelchair manoeuvring, and the door should be capable of being opened outward in an emergency

The floor surface should be level and non-slip.

An emergency alarm with full-length pull cord should be installed.

Where there is more than one unisex WC, the second one should be handed to give an option of right or left hand transfer.

Where there is a run of more than 4 wc cubicles, one of the cubicles should be suitable for ambulant disabled persons use. There should also be an enlarged cubicle, a minimum width of 1200mm. This is additional to any disabled WC facilities provided

Fittings
Lower level hand dryers (electric or paper) in toilets with disabled access

All lighting should be PIR generally, but particularly in rooms accessible by wheelchair users.
[drawing available]

14. Circulation spaces

Circulation should be considered for moving between floors/ levels of a building and along horizontal routes, e.g. corridors, through doors. Every facility within the building should have an accessible approach route.

Vertical circulation/ Changing floors

Principles
It is good practice to position vertical circulation 'nodes', e.g. lifts, stairs or ramps together, in an obvious position for ease of location.

Start and finish points of ramps and stairs should also ideally be located near to each other.

Tactile warning surfaces should be used at the top and bottom of stair flights

Step nosings should be highlighted to contrast in colour and tone with the rest of the step.

Wherever possible over short rises, it is preferable to use a ramp, rather than a mechanical means of moving vertically, e.g. a short rise platform lift.

Ramps
It is good practice to always provide a stepped route as an alternative to a ramp for use by some disabled people with walking difficulties.

The ramp gradient should be 1:15 with level landings at least every 10m, 1:12 is the maximum gradient with level landings at least every 5m. In practice most users find 1:12 too steep.

The ramp width should be 1.2m to allow the companion to walk adjacent.

Landings at top and bottom should be 1.2m in length, clear of any door swings.

Intermediate landings should be 1.5m in length

There should be a kerb or other protective barrier at least 100mm high on open sides of the ramp.

Where work is carried out to existing buildings, it is the university policy to improve access wherever possible; any ramp proposals which do not meet the regulatory requirements should be discussed with both the university design office and local authority. Non compliant ramps can be acceptable dependant on circumstances.

Handrails
If a ramp exceeds 2m length, handrails should be installed on both sides of the ramp. Handrails should:-

Be at 900mm height and continuous across landings at 1100mm;

Extend 300mm at the top and bottom of the ramp;

Have 45-50mm diameter section to allow for people with limited use of fingers/gripping action.

Surface

The floor surface should be firm, even, easily cleaned and non- slip when wet or dry. Floors should have a non- reflective surface, which does not look slippery, e.g. polished tiles & terrazzo

Tactile warning surfaces should be installed at top and bottom of ramp.

Stairs
Maximum rise in any one flight should be or 1.8m for internal steps, (1.2m for external steps). This applies where no lift is provided, but is good practice for any staircase design

The unobstructed width between handrails should be 1000mm.

Top, bottom, and intermediate landings should have a minimum dimension of 1.2m.

Open risers and tapered treads are a hazard for disabled people using mobility aids and for others with vertigo. If you use open risers there should be a lift adjacent. Risers should be 150mm or less for external steps, or 170mm or less for internal steps. Goings should be a minimum of 280mm deep for external steps, or 270mm for internal steps.

On a stair with tapered treads, goings should be a minimum of 280mm (external), or 270mm (internal) at a point 270mm from 'inside' edge of stair.

Nosings should be splayed or rounded, non-slip and have a colour or tone which contrasts with the rest of the step.

The step surface should be firm, even, easily cleaned and non- slip when wet or dry. A tactile surface and change in surface colour or tone should be installed at top and bottom of each flight.

Handrails should be installed at 900mm height above stair line on both sides of the flight extending 300mm past the top and bottom step with shaped ends to avoid sharp obstructions (i.e. rail turned towards wall)

Handrail section should be 45-50mm in diameter, be continuous across landings, and 1100mm high above landings and at top and bottom of flight. A raised stud should be fitted on handrail above first and last step to alert visually impaired people.

Lifts
University Policy is to ensure that all new lifts are suitable for wheelchair access even if at the time the lift is installed or a goods lift is upgraded there is not an accessible entrance into the building. This gives scope in the future to improve the access by future entrance adaptations. The following criteria should be followed for design of a wheelchair-accessible lift.

The car size should allow a 1.75m turning radius of a manual wheelchair. The absolute minimum dimensions of car size should be 1100 x 1400mm with a mirror on the car rear wall to aid wheelchair reversing and if the minimum size is used, it is preferable to design the lift to operate as a though lift.

The lift door should give minimum 800mm clear width and should have a time delay and an override sensor installed.

Controls should be positioned inside and outside the lift between 900mm - 1200mm height, inside the lift controls should be at least 400mm from a corner. Best practice is to install two sets of controls, one at eye level for people standing and one at a lower level for people in wheelchairs. There should be tactile call buttons and visual and tactile indication of the storey level, on each storey served,

There should be a signalling system which gives 5 seconds notification that the lift is answering a landing call, and a dwell time of 5 seconds before the lift doors close after they are fully open

Handrails should be at 900mm height to side and rear walls of car

If the lift travels to more than three storeys, a voice announcement should give position of lift

There should be sufficient space outside the lift (1500 x 1500mm.) for wheelchair manoeuvring. Best practice is to install a flip down seat for an ambulant disabled person.

In most instances a passenger lift is preferred to a short rise lift. However in some instances, where there is insufficient space to install a ramp, and where it is uneconomic to install a full passenger lift a short rise, or platform lift may be considered.

The following design criteria should be used:-

All platform and stair lifts should accommodate a wheelchair user in their own wheelchair and a companion. A minimum platform size is 900mm x 1100mm.

Platform lifts cannot be used as a means of escape and should not be installed where they obstruct a means of escape.

Platform lifts should be designed to BS EN 81-

41:2010 Stair lifts should be designed to BS EN 81-

41:2008

Horizontal circulation
Design criteria should be followed for all key circulation routes along corridors and across open plan areas. Positioning doors, door widths and direction of door swings, also should be considered together with other possible obstructions.

Main circulation gangways or corridors should be 1200mm wide
Low-level obstructions on main circulation routes and doorways opening out into circulation should be avoided
Wall mounted fixtures should be set in recesses wherever possible to minimise hazards
Doors across corridors should be a minimum of 800mm
Where possible, electromagnetic catches should be fitted to doors across corridors.
Signage should be provided to aid ‘wayfinding’
Seating should be provided on long stretches of corridor.
Areas of lowered ceiling e.g. area of reduced headroom under stairs should be guarded to avoid collisions.

See BS 8300:2010 for full information.

Floor surfaces

Surfaces should be:-

- Firm, even, easily cleaned and non- slip when wet or dry;
- Suitable for manoeuvring a wheelchair, i.e. not deep piled carpet;
- Non-reflective;
- Boldly patterned furnishings should be avoided, e.g. carpets, which could confuse people;
- There should be good colour definition between floor covering, walls, doors and furniture for people with limited sight.

Natural and artificial lighting
Circulation routes, including stairs, lifts etc. should be illuminated sufficiently by day and artificial lighting.

Illumination, especially on circulation routes, should be even, without areas of shadow and glare, e.g. from sunlight or from spotlights should be avoided.

Areas of glazing
Large areas of glass and glazed walls should be guarded to avoid collisions
Areas of glass and glazed walls should be identified with vision bands (normally these are stick-on symbols at regular intervals across the glass at eye level height). Final style of manifestation should be approved by the University prior to completion.

Doors
Door design and positioning should allow for independent circulation through the building by disabled people.

There should be sufficient circulation space on both sides of door to allow wheelchair manoeuvre

If there is a lobby, there should be 1200mm. space between each lobby door.

Internal doors should allow for 850mm clear width, 750mm is the minimum clear width and not desirable where it is possible to obtain 850mm.

Doors should be suitable for a wheelchair user to open independently by providing a 300mm offset at leading edge of door. If this is not possible, or if there is heavy traffic through the door an automatic opening device should be installed. Automatic sliding doors is preferred. The use of hold open devices should be considered (in consultation with the University Fire Prevention Department).

Frameless glass doors should be avoided. Door location and frame should be clearly identified by colour/ tone contrast. Vision bands should be installed on fully glazed doors.

Doors should have a vision panel from a height of no more than 900mm to at least 1.5m height from floor level, positioned towards the leading edge of door.

Door handles should be easy gripped, i.e. tubular profile and ironmongery should contrast well with door colour

Door handles should be mounted below 1040mm height.

Force required to open door should be less than 30N, and door closers regularly maintained to achieve this.

15. Egress

Fire escape provision should be in accordance with the Building Regulation requirements. In addition to the Building Regulations procedures for disabled persons evacuation are included in the University's Fire Safety Policy document 'Evacuation Provision for Disabled Persons' (See appendix 1)

Consultation with the University Fire Officer is required when work is taking place within existing buildings to advise on any implications arising from the fire risk assessment for the building, Personal Escape Plans and any licensing requirements

A fire evacuation policy should be agreed with the Local Authority fire officer.

For routine building users who require assistance a Personal Emergency Escape Plan should be arranged. A PEEP (personal emergency escape plan) works out in advance the preferred route of egress, place of refuge for assisted escape and may nominate a personal assistant to assist in evacuation, or the provision of an evac chair or other aid where this is appropriate. The plan may include the provision of special types of alarms (i.e., vibrating, visible). It will be necessary to conduct the plan procedures as part of any routine safety evacuation test.

The route to exit or fire protected lobby should have a clear width of 1.2m and be free from obstructions

Signage should comply with fire officer requirements.

A visible alarm should be installed where a person with a hearing impairment is occupying a room alone. Special considerations apply to the design of alarms where a hearing impaired person will be sleeping and provision for effective vibrating alarms must be
made.

Where escape from upper floor is necessary, wheelchair refuge/s should be provided within fire-protected lobby. (Number to be agreed with fire officer).

Two-way intercom at refuge point should be provided to allow the wheelchair user to keep in contact with rescuers in an emergency.

Escape stairs should comply with items in Section 13.

General references

- BS8300: 2010 - Access for the disabled to buildings
- BS5588 - 8 - Means of escape for disabled people
- Disability Scotland access guide
- Technical Standards
- Equality Act 2010

Appendix 1
Dual Transfer WC

Appendix 2
Glass door manifestation guidelines

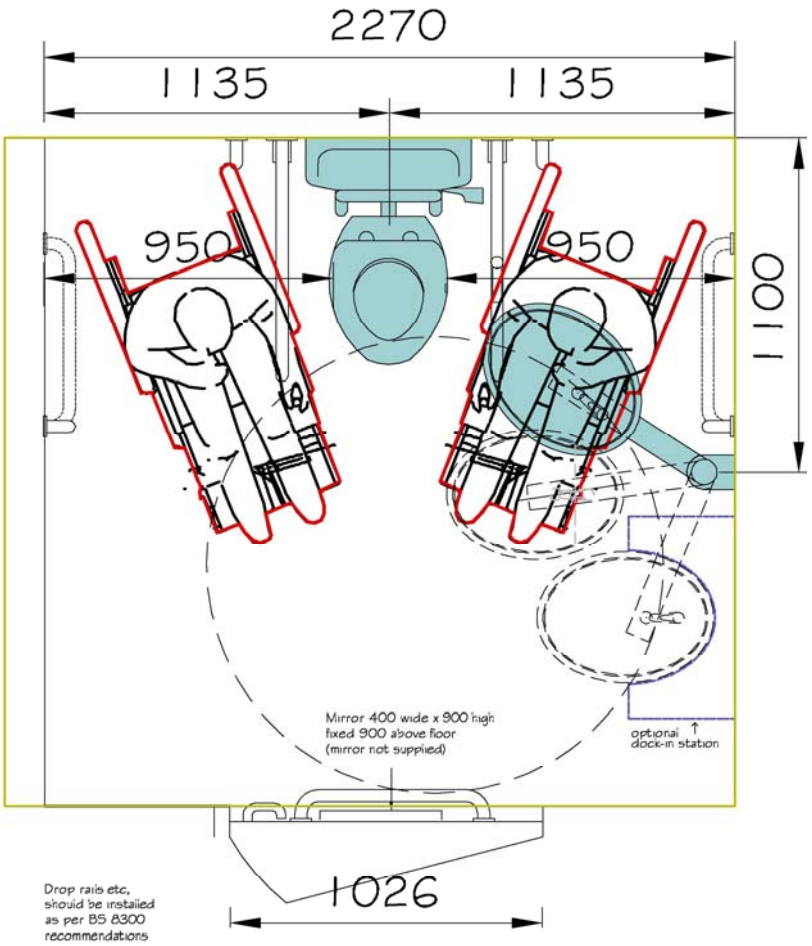
Appendix 3
University's Fire Safety Policy document 'Evacuation Provision for Disabled Persons' (full document) is available on request.

APPENDIX 1

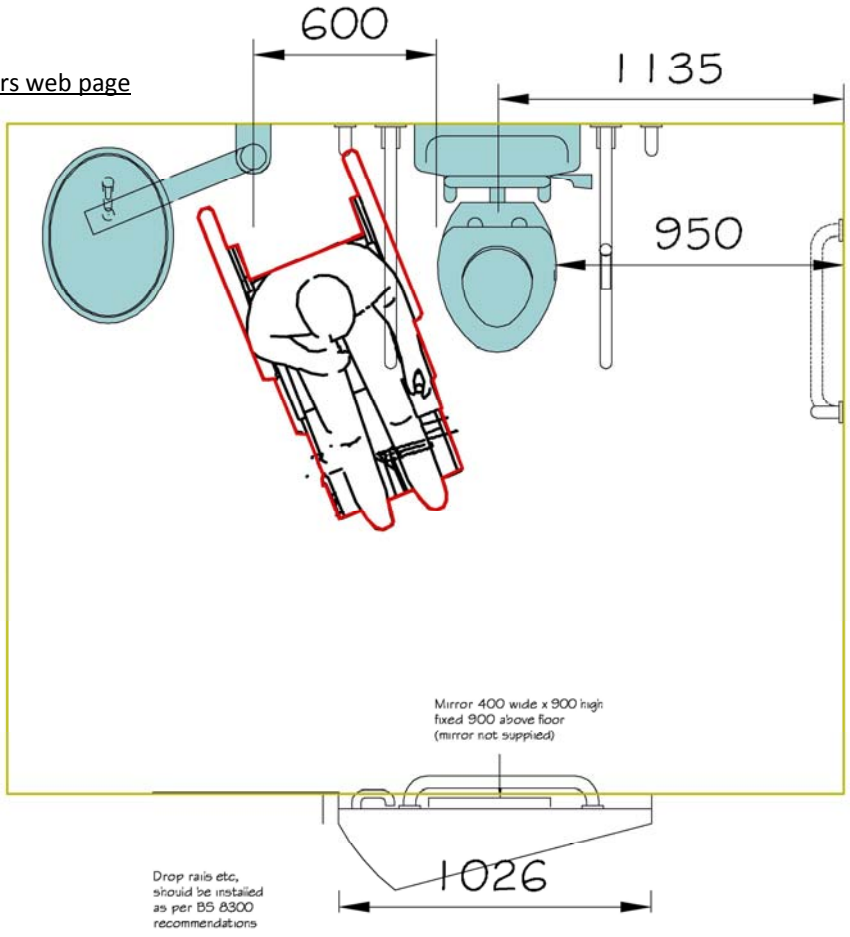
Dual Transfer WC

The dual transfer WC is expected to supplement any right hand and left hand accessible toilets and should preferably be located on the ground floor of buildings.

Variations or inability to accommodate a dual transfer accessible toilet should be discussed with a project manager and a representative of the disability compliance team, before finalisation of design



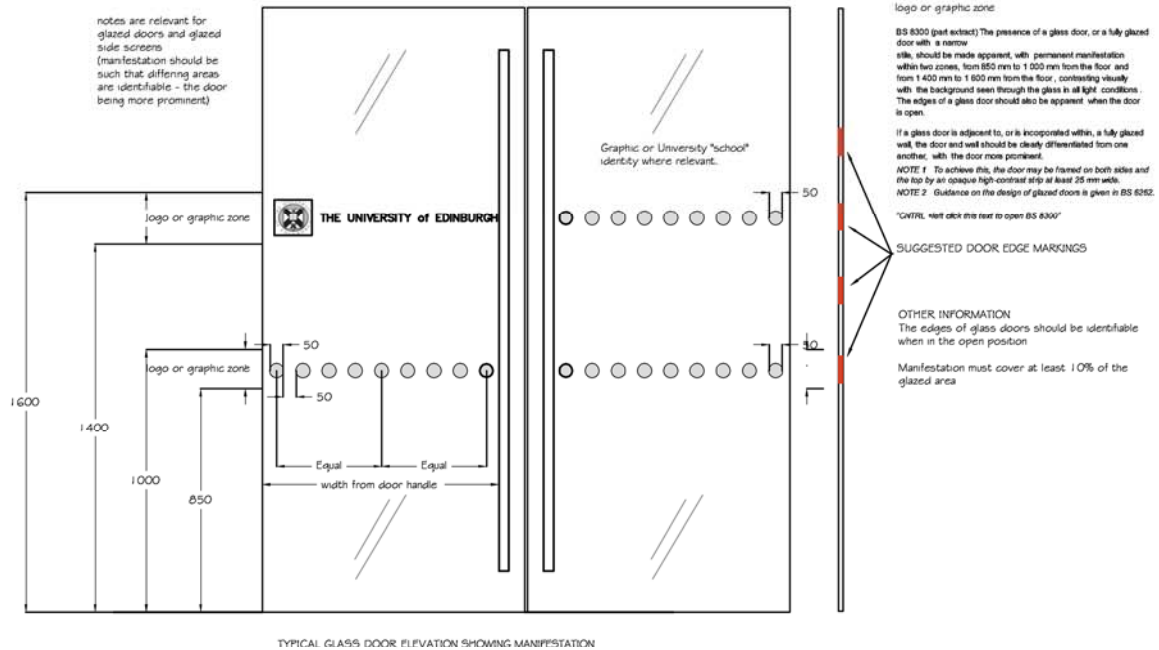
ROPOX SWING BASIN – refer to manufacturers web page
Ropox swingbasin alternative room layouts



APPENDIX 2

Manifestation

GLASS DOOR MANIFESTATION options



TYPICAL GLASS DOOR ELEVATION SHOWING MANIFESTATION

logo or graphic zone

BS 8300 (part extract) The presence of a glass door, or a fully glazed door with a narrow stile, should be made apparent, with permanent manifestation within two zones, from 850 mm to 1 000 mm from the floor and from 1 400 mm to 1 600 mm from the floor, contrasting visually with the background seen through the glass in all light conditions. The edges of a glass door should also be apparent when the door is open.

If a glass door is adjacent to, or is incorporated within, a fully glazed wall, the door and wall should be clearly differentiated from one another, with the door more prominent.

NOTE 1 To achieve this, the door may be framed on both sides and the top by an opaque high-contrast strip at least 25 mm wide.
NOTE 2 Guidance on the design of glazed doors is given in BS 6262.

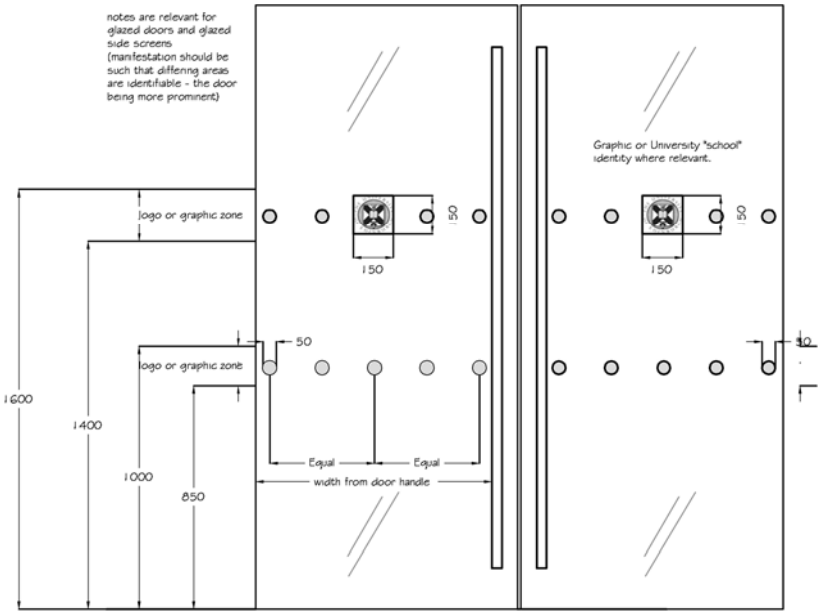
"CNTRL +left click this text to open BS 8300"

SUGGESTED DOOR EDGE MARKINGS

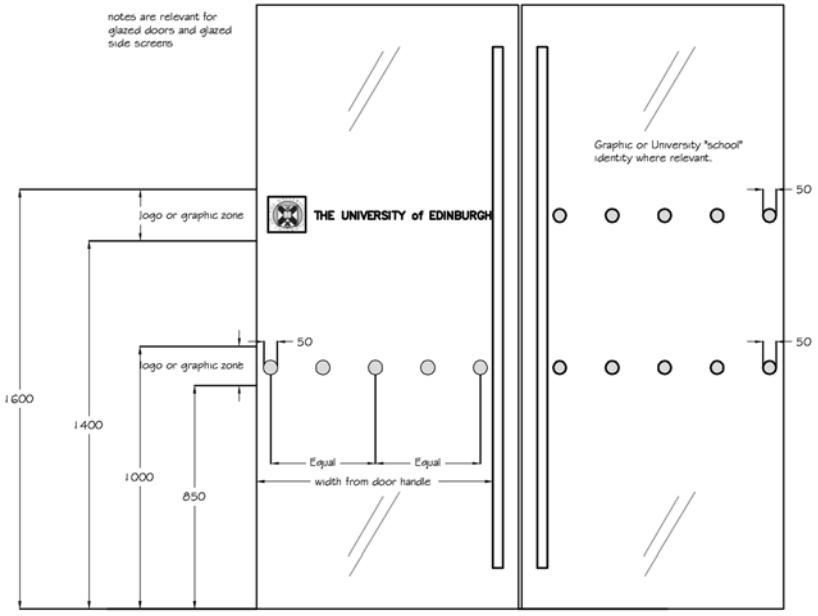
OTHER INFORMATION
The edges of glass doors should be identifiable when in the open position

Manifestation must cover at least 10% of the glazed area

The above is indicative of manifestation / markings which would satisfy BS 8300. Alternatives might be acceptable if it meets the BS criteria and is to the satisfaction and approval of the university Design Office.
Door manufacturers/suppliers are expected to show compliance with BS 8300 prior to manufacture .



TYPICAL GLASS DOOR ELEVATION SHOWING MANIFESTATION



TYPICAL GLASS DOOR ELEVATION SHOWING MANIFESTATION

APPENDIX 3

University's Fire Safety Policy document 'Evacuation Provision for Disabled Person's available on request