

**Brighton and Sussex University Hospitals NHS Trust**

**3Ts Hospital Redevelopment: Stage 1  
Design Appraisal of Access for Disabled People of the 1 to 200 Plans**

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**Draft**

## Introduction

The 3Ts Hospital redevelopment - teaching, trauma, tertiary care, is a major capital development taking place in the City of Brighton. Its aim is to modernise the Royal Sussex County Hospital (RSCH) and expand the services provided for seriously ill and injured patients. There are five key elements of the 3Ts which will be completed in two stages. The five elements are as follows:

- Replace the ageing buildings. The main buildings at the front of the RSCH are nearly 200 years old. This will allow modern facilities to be provided which are welcoming, accessible and purpose-built.
- Neurosciences - Hurstwood Park Regional Centre for Neurosciences is being relocated from Haywards Heath to Brighton.
- Sussex Cancer Centre - the Sussex Cancer Centre is being expanded to include the development of a new chemotherapy day unit, and increased radiotherapy services and a doubling of the number of beds on the oncology ward.
- Major Trauma Centre - replacing the ageing buildings and transferring neurosciences to Brighton will allow the establishment of a major trauma centre for Sussex and the South-East.
- Brighton and Sussex Medical School - the 3Ts redevelopment will mean that within the hospital, state of the art teaching, training and research facilities can be provided.

## Design Appraisal

The following document provides a design appraisal of the 1 to 200 plans for **Stage 1** of the redevelopment. The reason for a design appraisal is to identify potential disability access issues, in order to prevent retro-fit solutions having to be applied later on. Such solutions are often inferior and in many cases more expensive. This report will identify generic issues applicable to the whole scheme, for instance good practice for receptions and waiting areas, lifts, staircases and interview rooms. It will then identify, on a level by level basis, specific issues relevant to each department. The decant arrangements will then be examined.

## **Executive Summary**

The overwhelming impression of the 3Ts development is one in which the access needs of disabled people have been carefully considered. This is highlighted by the considerable input into the scheme that has been made by different groups representing disabled people, The Equality Impact Assessment and the Statement of Minimum Standards relating to disability access and facilities. The plans reflect the work that has been undertaken to date, particularly the minimum standards document. The following section highlights particular strengths of the plans:

- The corridor widths.
- The location of automatic opening doors. This will be commented on in greater detail in the floor by floor analysis.
- The location and number of wheelchair accessible toilets.
- The separation of nappy changing facilities from accessible toilets.
- The care that has been taken in designing the main entrances to stage one and stage two.
- The location of the reception desks and waiting areas.
- The grouping of accessible car parking spaces around the lift lobby thereby minimising walking distance to the lifts and stairs.

Considerable thought has been given to the wayfinding strategy, which is a vital element for ensuring accessibility for disabled people, particularly those people with sight or cognitive impairment: consequently wayfinding information will be vitally important to ensure all users can manage their way round the building effectively. Comments where applicable are included in the floor by floor analysis. It is noted in the minimum standards that a minimum door width of 750mm has been specified. However, an effective clear width of less than 800 - 825mm could result in people with large wheelchairs or poor maneuverability damaging themselves or the door frame and so where possible door widths that will maintain this dimension should be specified.

## Generic Issues

This section builds upon the statement of minimum standards that was produced in 2011.

### Reception Desks

Accessibility at reception desks are vitally important as they are often the first point of contact that a patient, relative, carer or visitor will have with the hospital. Reception desks should have the following characteristics to make them suitable for use by all disabled people:

- Clear visibility from the entrance to the building or the entrance to a department. Where this cannot be achieved, good signage visible from the entrance showing the route to the reception desk should be implemented
- Clear manoeuvring space in front of the reception desk or counter.
- Reception desks should be set to a height suitable for seated and standing users with high and low sections.
- Access for wheelchair users should be provided for both staff and visitor sides of the counter.
- A well signed induction loop should be provided.
- If possible positioning reception desks in front of windows where there is bright sunshine should be avoided. Bright sunlight will cause the receptionist's face to be silhouetted, making lipreading difficult.
- The lighting should be good on both sides of the counter with a minimum of 100 lux.
- Provision of seats near lowered counters would be helpful.

### Waiting Areas

It is important that waiting areas are designed in a way that disabled people can feel at ease. The following issues can help in this respect:

- Acoustics can be important in order to provide noise reduction. This would include providing adequate sound insulation to minimise intrusive noise and avoiding too many hard surfaces.
- Providing a range of seating at different heights between 420 and 580 mm. Consideration could also be given to providing "perch" seats at 650 to 800 mm.
- A mixture of fixed and loose seating provides flexibility of use and space.
- A mixture of seating with and without armrests should be provided.

- Space for a wheelchair user to pull up alongside the seated companion, should be provided.
- One space within or at the end of a block of seating, could be provided for an assistance dog to rest.
- Seating should contrast visually with the surrounding surfaces.

## WCs

The provision of wheelchair accessible WCs is generally excellent throughout the building. In addition to the comment in the statement of minimum standards that wheelchair accessible WCs will be in accordance with BS-8300 the following observations should be noted:

Alarm systems for accessible WCs should have an audio as well as visual alarm and be locally as well as centrally monitored. Staff should be trained in what to do when the alarm is activated. Care should be taken to ensure that the alarm pull cord is not kept tied up so that it is not accessible to someone should they need to activate it from the floor. Cubicle doors should not be fitted with an automatic door closure, instead they should be provided with a horizontal grab rail to assist closing. Although specified in recommended guidance a colostomy shelf is sometimes omitted. Care should be taken to ensure that this is not the case. Similarly two coat hooks at two different levels are important and should not be omitted. Doors to Ambulant accessible WCs should be able to open outwards. This is to allow greater space within the cubicle and to make it easier to open the door if somebody falls against it.

## Changing Rooms

Self-contained unisex changing facilities with space for a companion or assistant of either sex, should be provided, with communal separate-sex changing facilities as an additional provision. Wheelchair users need sufficient space for dressing and undressing while seated or lying down. The following provisions should be provided within the changing facility:

- Vertical grab rails
- Two clothes hooks, one at 1 050 mm and the other at 1 400 mm above the floor
- A towel rail
- A tip-up seat
- A back rest
- Drop-down support rails on the side and far walls
- A horizontal grab rail
- An alarm pull cord

- A mirror
- A wheelchair turning space (1 500 × 1 500) mm
- A horizontal pull rail to help close the door from a wheelchair

### Interview Rooms

Interview rooms should be wheelchair accessible with suitable turning space provided in front of any desks. For patients, relatives or carers with hearing impairments, consideration should be given to either fitting these rooms with individual hearing loop systems or having portable hearing loop systems which can be transferred to the appropriate room. Some systems may allow sound to be picked up by hearing aid users in adjacent rooms; this is known as overlap. Advice should be sought from manufacturers to prevent this. Good levels of lighting should be maintained to aid lip reading for hearing impaired and partially sighted people.

### Lifts

In addition to the points made in section 2.13 of the minimum standards for disability access and facilities it is important that clear signs are provided on the wall opposite the lift entrance or exit to indicate which level the lift is at and what services are on that floor. All lifts throughout the building are in excess of the minimum size required to allow a wheelchair to turn within the compartment.

### Vertical communications

The minimum standards document requires all steps and stairs to comply with BS 8300. Commonly observed issues with new steps and stairs are as follows:

- When viewed from the top stair, colour contrast between nosings can often look indistinguishable creating the impression of a smooth steeply sloping surface. Care should be taken to prevent this from happening.
- At each landing, for each floor level, a clear sign showing the level, and services on the floor should be provided.
- Flights should not contain more than 12 risers between landings.
- The ends of handrails should extend for a minimum of 300 mm beyond the end of the stairs into the level landing. The ends of the handrails should be designed in a way that prevents clothing being caught.

The following table highlights access issues for each floor of Stage 1 of the 3Ts project:

Area	Level	Stage	Current Situation	It is recommended that:
Car Park	B1	1	<p>The car park has 161 spaces of which 13 (11 in stage 1 and a further 2 in stage 2) will be accessible bays. This constitutes 8% of the total spaces and exceeds the minimum guidance.</p> <p>The space furthest from the lift lobby area is 30 m, but the majority of spaces are much closer, minimising the distance between the spaces and the entrance to the lift and stairs.</p> <p>Some of the bays do not conform fully to the recommendations contained in BS 8300 because each space does not have a hatched access zone on each side of the space. Each does however have a hatched safety zone for boot access for cars with rear hoists or ramps.</p> <p>Lighting within the car park.</p>	<p>The number of spaces remain in excess of the minimum number recommended.</p> <p>Spaces continue to be congregated around the lift area to provide the minimum distance between the parking space and the lift area.</p> <p>A percentage of the accessible bays are provided with hatched safety zones to both sides in accordance with guidance in BS8300.</p> <p>Lighting should be at a good level within the car park and particularly in the area where the accessible bays are located. This should be to a minimum value of 100 lux. This will also ensure that the entrance area to the lift and stair lobby is highlighted.</p>

			<p>Signage</p> <p>Route to the lift lobby</p> <p>Height clearance within car park</p>	<p>Signage should be clear within the car park area showing clearly where the entrance to the lift lobby is located. Policy with regard to charging should be made clear.</p> <p>Zebra crossings should be located in front of the entrances to the lift lobby.</p> <p>For wheelchair accessible vehicles, the normal height of these vehicles is 2000 mm. The headroom clearance within the car park should be a minimum of 2100 mm.</p>
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Area	Level	Stage	Current Situation	It is recommended that:
Lift/Stair lobby	B1	1	<p>Doors</p>   <p>Signage</p>   <p>Lighting</p>	<p>The doors should be automatically opening.</p> <p>Doors should contrast visually with their surroundings.</p> <p>Signs should be clear within this area directing people to the lifts and stairs.</p> <p>Lighting should be a minimum level of 100 lux throughout this area.</p>

Area	Level	Stage	Current Situation	It is recommended that:
Main Entrance	01	1	<p>The main entrance is from Eastern Road.</p> <p>There are drop-off points located on Eastern Road adjacent to the main entrance. There is a walkway to the front entrance.</p> <p>Entrance to the hospital is via a rotating door and 2 further doors on either side of the rotating door.</p>	<p>Drop-off points are clearly signposted and located on level ground. Dropped curbs with tactile paving should be located at regular intervals along the dropping off zone. The width of the on street parking be should be a minimum of 3.6 m to allow a safety zone on the curb side of the street.</p> <p>Revolving doors of whatever size are not considered accessible. Ambulant disabled people, older people, those with sight impairments and guide dogs may not have the confidence to negotiate them. The doors on either side of the revolving entrance will be the main access entrance for disabled people. These should be automatic.</p> <p>There is level access from the walkways to the entrance of the building and that all doorway thresholds and junctions between surfaces are provided to be flush with the interior floor level.</p> <p>Floor surfaces and any matting provided at the entrance, do not impede wheelchairs.</p>

Area	Level	Stage	Current Situation	It is recommended that:
<p>Main Reception</p> <p>Discharge Lounge</p>			<p>The main reception is located approximately 10m from the main entrance doors. It can be seen clearly from the entrance.</p> <p>There is a sitting area with a kitchen attached.</p>	<p>Where there are full height glass doors and screens they are provided with glass manifestation markings.</p> <p>Any signage at the entrance to the building should be logical and clear and should indicate clearly the location of the reception desk immediately on entering the building.</p> <p>Good transitional lighting levels between the interior and exterior of the building are maintained at all times of the day and in all weather conditions</p> <p>Refer to generic issues section above, covering reception areas.</p> <p>The sitting area should contain different kinds of chairs with and without armrests. These should be laid out in a way that allows wheelchair users, space to sit next to their companion.</p> <p>The kitchen should have counters that are suitable for wheelchairs with space available under the counter.</p>

Area	Level	Stage	Current Situation	It is recommended that:
Waiting areas for rheumatology, ENT, maxillofacial, and audiology			There is a large waiting area located to the right of the main corridor, there are further waiting areas in rheumatology and ENT audiology.	The waiting areas should comply with the guidance contained in the generic issues section above.
Retail area			The retail area is located adjacent to the chapel (historical artefacts)	When the retail unit is equipped it should be fully accessible. This will include ensuring; <ul style="list-style-type: none"> <li>• adequate space between rows of goods</li> <li>• counter and checkout at accessible height</li> </ul>
Treatment areas			There are treatment areas for ENT, audiology, maxillofacial and rheumatology.	Ensure one treatment room in each area is equipped for disabled users. Include a height adjustable treatment table and access to a mobile hearing loop.  Lighting should be even and consistent throughout. Levels should be to a minimum of 100 lux.

Area	Level	Stage	Current Situation	It is recommended that:
Nuclear Medicine	02	1	The main reception is located to the right of the lift shaft	The reception should be well signposted from the lift. The reception should meet the guidance contained in the generic section above.
Reception				
Waiting rooms			There are three waiting areas in this department.	The waiting areas should be well signposted and comply with the guidance above.
Aseptic suite			The Aseptic suite is a staff only zone with specific conditions to ensure a sterile environment.	This area is not considered for disabled access, due to the nature of the environment. However this should be checked with the human resources department.
Non invasive cardiology, therapies			There is one reception area and one waiting area in this department. These are located off the main corridor.	Clear signs are located opposite the lift exit directing users to the appropriate area. These areas should also comply with the guidance contained in the generic section above.
Physio rehab gym			This area is located to the left of the connecting corridor	Access to this area should be made as easy as possible for physically disabled people. The doors to this area should be automatically opened. The activation controls should be located at a suitable height for wheelchair users of 750mm from the floor.

Area	Level	Stage	Current Situation	It is recommended that:
<p>Neuro-sciences</p> <p>Facilities management</p>	03	1	<p>This area is predominantly an outpatient zone and is located off the main corridor. The main reception is located in the western wing of stage 1. There is a further waiting area in the central wing</p> <p>This is a staff area which is accessed from the stairs and lifts in the eastern wing. Provision has included a wheelchair accessible WC. The department comprises offices, store rooms and meeting rooms.</p>	<p>Clear signage is located opposite the lift exit directing users to the reception area. The reception area and waiting areas should follow the guidance contained in the generic section above.</p> <p>Clear signage is located opposite the lift doors and that the doors between the lobby and the corridor are designed in a way that they are either kept open, or are fitted with automatic opening and closing devices. These areas should also be designed with consideration that disabled staff could be employed.</p>

Area	Level	Stage	Current Situation	It is recommended that:
Fracture and imaging (cold)	04	1	<p>This is a high volume inpatient and outpatient area. It can be accessed from any of the three lift shafts. For the fracture clinic the reception is located approximately 25m from the lift and stairs. For the imaging department the reception is located almost opposite the middle wing lifts and stairs.</p> <p>This area is extremely well provided for in terms of wheelchair accessible WCs, there being 14 within the departments.</p> <p>There are changing rooms associated with each imaging suite. These are 2.8m by 1.8m.</p>	<p>For the fracture clinic, clear signage will be required from the lifts to the reception. The reception and waiting areas should comply with the guidance in the generic section above.</p> <p>A number of the changing rooms should be made suitable for use by mobility impaired patients. This would involve there being space for a carer to accompany and assist the patient. BS 8300 recommend changing room dimensions of 2m by 2.2m. Further information about changing rooms is contained in the generic section above.</p> <p>The exit from the doors in front of each lift shaft should have automatic opening doors.</p>

Area	Level	Stage	Current Situation	It is recommended that:
<p>Neuro theatres and Recovery, hot imaging.</p> <p>Ambulatory care unit</p>	05	1	<p>the accessible WC is re-designated because the current dimensions are not large enough. The BS 8300 accessible WC dimensions are 1.5m by 2.2m (minimum.)</p> <p>clear signage is located opposite the lift exits to guide patients and visitors to the staff base and waiting area.</p>	<p>The accessible WC is re-designated because the current dimensions are not large enough. The BS 8300 accessible WC dimensions are 1.5m by 2.2m (minimum.)</p> <p>Clear signage is located opposite the lift exits to guide patients and visitors to the staff base and waiting area.</p>



Area	Level	Stage	Current Situation	It is recommended that:
AMU, CIS Ward and CIS OPD	06	1	<p>Reception area</p> <p>Interview rooms</p>	<p>Audio as well as visual alerts are provided in the waiting areas.</p> <p>Hearing induction loops are provided at the reception desks.</p> <p>The reception desks are provided with a lowered section suitable for use by wheelchair users.</p> <p>Lighting levels at the reception desks are provided in adequate levels to facilitate lip reading for partially sighted people.</p> <p>A range of seating in a range of heights is provided in the waiting areas. Some with arms and some without arms.</p> <p>If a seating plan is to be provided spaces for wheelchair users to sit alongside their companions and spaces for blind dogs are specified.</p> <p>A portable hearing induction loop is made available for use in the interview rooms.</p>

Area	Level	Stage	Current Situation	It is recommended that:
Multifaith - PALS - Cafe	06	1	<p>The PALS office is located with its window facing south</p> <p>Cafe</p>	<p>Any staff communicating with visitors to the PALS office should be positioned so that the light from the window falls on their face rather than silhouetting from behind to aid people with visual impairments. Good levels of artificial lighting should be provided at all times.</p> <p>There is adequate turning space of at least 1500 x 1500mm provided for wheelchair users and extra space for a companion or interpreter.</p> <p>Furniture is positioned to allow for face to face communication.</p> <p>A hearing induction loop is made available and a sign indicating its availability is provided.</p> <p>The cafe is well signposted to prevent people from wandering into the PALS area.</p> <p>A range of seating is provided for customers, some with arms and some without.</p> <p>Tables are provided with a minimum of 700mm to their underside.</p>

			<p>Interview rooms 1 &amp; 2</p>	<p>Circulation routes are kept clear and allow for wheelchair access.</p> <p>Menus are provided at wheelchair level.</p> <p>Menus are provided in a range of formats including Braille.</p> <p>A level threshold is provided from the cafe leading to the terrace.</p> <p>Floor surfaces and any matting provided at the entrance to the terrace do not impede wheelchairs.</p> <p>Where there are full height glass doors and screens it is recommended that they are provided with glass manifestation markings.</p> <p>Good transitional lighting levels between the interior and exterior of the building are maintained at all times of the day and in all weather conditions.</p> <p>Hearing induction loops are made available in the interview rooms.</p> <p>Lighting levels in the interview rooms are provided in adequate levels to facilitate lip reading for partially sighted people.</p>
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Area	Level	Stage	Current Situation	It is recommended that:
Critical Care	07	1	<p>Reception and waiting area</p>          <p>Interview rooms 1 &amp; 2</p>	<p>A hearing induction loop is provided at the reception desk.</p> <p>The reception desk is provided with a lowered section suitable for use by wheelchair users.</p> <p>Lighting levels at the reception desk is provided in adequate levels to facilitate lip reading for partially sighted people.</p> <p>Audio as well as visual alerts are provided in the waiting area.</p> <p>A range of seating in a range of heights is provided in the waiting areas. Some with arms and some without arms.</p> <p>If a seating plan is to be provided spaces for wheelchair users to sit alongside their companions and spaces for blind dogs are specified.</p> <p>Hearing induction loops are made available in the interview rooms.</p> <p>Lighting levels in the interview rooms are provided in adequate levels to facilitate lip reading for partially sighted people.</p>

			Ambulant accessible WC in staff rest area	The door to the ambulant accessible WC is able to open outwards as well as outwards.
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Area	Level	Stage	Current Situation	It is recommended that:
Medical Ward 80 - Bed	08	10	<p>waiting areas 1, 2 &amp; 3</p> <p>Interview room</p> <p>Signage</p>	<p>Audio as well as visual alerts are provided in the waiting area.</p> <p>A range of seating in a range of heights is provided in the waiting areas. Some with arms and some without arms.</p> <p>If a seating plan is to be provided spaces for wheelchair users to sit alongside their companions and spaces for blind dogs are specified.</p> <p>A portable hearing induction loop is made available for use in the interview room.</p> <p>Due to the likelihood that there will be patients with dementia in this area the signage should be appropriate for people with this condition. This should include pictogram signage and color coding to aid with orientation.</p>

Area	Level	Stage	Current Situation	It is recommended that:
Med Ward - MDU Neuro-	09	1	<p>The area is made up of ensuit bedrooms and 4 four bedded bays. There are also two medical day rooms.</p> <p>Beverage bay</p>	<p>Level 9 does not have interconnecting corridors between wings therefore clear information needs to be provided in the lift areas.</p> <p>The beverage bay should have counter levels suitable for wheelchair users</p>

Area	Level	Stage	Current Situation	It is recommended that:
Neuro Stroke Nuro-stroke Rehab	10	1	<p>The area comprises ensuite bedrooms and 4 x four bedded bays.</p> <p>There is also an external terrace area accessed by a ramp.</p> <p>In addition there are neuro rehab facilities including a physic gym</p>	<p>Clear signage is provided to guide patients, relatives, carers and visitors to the appropriate areas.</p> <p>Refer to the generic issue section for information about accessible ensuite bedrooms.</p> <p>The ramp to the external terrace should have a minimum gradient of 1 in 20.</p> <p>Access to the rehab facilities should be made as easy as possible to allow patients to enter these areas with a minimum of effort. This would involve using automatic doors where appropriate movement in the.</p>



Area	Level	Stage	Current Situation	It is recommended that:
Relatives overnight stay	11	1	<p>There are three bedrooms with ensuite facilities</p> <p>Bedroom 2b</p>	<p>As bedroom 2b is the largest of the three rooms it is equipped with facilities for disabled people in mind.</p> <p>This room should be equipped with an emergency assistance alarm which is centrally monitored.</p> <p>If possible an adjoining door to connect room 2b and room 1b for use by family or carers</p> <p>Consideration should be given to supplying a ceiling hoist to run from the bed to the ensuite shower room.</p> <p>Minimum clearance of 1500mm x 1500mm to allow wheelchair users to gain access to the side of the bed, should be provided.</p> <p>A space of 700mm minimum on the other side of the bed should be provided to allow for another person to assist with transfer.</p> <p>Currently the ensuite dimensions are 2000mm x 1800mm.</p>

				<p>To allow for a tracked ceiling hoist and wheelchair access the ensuite room dimensions should be 3100mm x 2500mm minimum.</p> <p>The shower room fittings should be in accordance with the recommendations in BS8300.</p>
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Area	Level	Stage	Current Situation	It is recommended that:
Simulation / Teaching Doctors Mess and Management	11	1	<p>Reception area.</p> <p>Meeting rooms</p>	<p>The reception desks are provided with a high section and a lower section suitable for wheelchair users.</p> <p>The reception desks are provided with hearing induction loops.</p> <p>Lighting levels at the reception desks are provided in adequate levels to facilitate lip reading for partially sighted people.</p> <p>A portable hearing induction loop is made available for use within the interview room.</p> <p>Sockets and switches are located at heights that are accessible for wheelchair users.</p> <p>A hearing induction loop is provided within the seminar/meeting room.</p> <p>The use of bold patterns on any floor coverings used is avoided as these can be confused for a change in level by some partially sighted people.</p> <p>Where seating is provided some seats with arm rest and some without arm rests are provided.</p>

			<p>Accessible WC located 50m from the meeting rooms at the front of the wing.</p>	<p>Where tables are provided a minimum clearance of 700mm to their underside is maintained to allow access for wheelchair users.</p> <p>An accessible WC is provided in closer proximity to the meeting rooms and reception at the front of the wing.</p>
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