



From [REDACTED]
Sent: 03 October 2019 15:47
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Subject: A/122/19/OUT Land off Arundel Rd BN16 4ET PA/19/SE/AR/53493
Importance: High

FAO – Mrs A Gardner

Dear Mrs Gardner

Thank you for consulting Sport England on the above outline application.

Sport England – Non Statutory Role and Policy

The Government, within their Planning Practice Guidance (Open Space, Sports and Recreation Facilities Section) advises Local Planning Authorities to consult Sport England on a wide range of applications. <https://www.gov.uk/guidance/open-space-sports-and-recreation-facilities-public-rights-of-way-and-local-green-space#open-space-sports-and-recreation-facilities>

Sport England assesses this type of application in light of the National Planning Policy Framework (NPPF) and against its own planning objectives, which are **Protect** - To protect the right opportunities in the right places; **Enhance** - To enhance opportunities through better use of existing provision; **Provide** - To provide new opportunities to meet the needs of current and future generations. Further information on the objectives and Sport England's wider planning guidance can be found on its website:

<http://www.sportengland.org/planningforsport>

The Proposal and Assessment against Sport England's Objectives and the NPPF

The application is 'outline' – 160 homes including to 'expand the current sport provision to form a sports hub. The details are limited.

Strategic Need for the Facility

Unknown at this time. Sport England would expect to find the strategic need for a facility of this sort to be set as part of the planning application. We would expect a robust Playing Pitch Strategy to justify an 3G artificial grass pitch (AGP). We would not fully support the Football Foundations comment for a 3G AGP below based solely on an investment plan (i.e. LFFP).

Facility Design

Sport England seeks to ensure the new sports facilities are fit for purpose. Limited details are submitted with the application.

Designs will have to regard to the following design guidance notes:

<http://www.sportengland.org/facilities-planning/tools-guidance/design-and-cost-guidance/>

The ECB support the proposal and have provided the following comments for guidance. The adjoining site is currently used by Angmering Cricket Club who have around 25 playing members. The club currently play Sunday fixtures and do not have a junior section.

The club would be interested in becoming part of the proposed sports hub with a long term lease for their use of the ground. The proposed housing development may allow the club to grow and may well lead to an increase playing membership and additionally provide them with an opportunity to start a junior section. To assist with this the club would benefit from training provision such as a mobile cage that could be used for batting and bowling practice. An agreement over the storage of a mobile cage will be required.

For the proposed relocation of the cricket pitch the ECB would require a non turf pitch to be installed from the ECB list of Approved Systems. The ECB recommend that a sinking fund be established to provide for the maintenance of the non turf pitch when the warranty period expires.

In terms of the boundary size, the ECB would want to see a minimum boundary of 45.72m (as shown in the attached diagram).

The ECB would highlight that a risk assessment should be undertaken if there will be any paths, roads, buildings, play areas or similar with 80m. The risk assessment will identify any risk of ball strike and include a recommendation in terms of mitigation. There is currently one company who have proven to ECB that they have a detailed methodology to analyse ball trajectory and are able to indemnify liability, Labosport UK Ltd, contact details as follows:

Labosport UK Ltd



The ECB understand that there have been drainage issues at the current ground and we recommend that a feasibility study be undertaken by a fine turf consultant to identify suitable solution. At present, ECB works with the following fine turf consultants:

TGMS: www.tgms.co.uk/

Total Turf Solutions: www.totalturf solutions.co.uk/

STRI: www.stri.co.uk/

If the fine turf consultant identifies that a drainage system is required there will be a need for an agreement on the ongoing maintenance of the system.

The ECB are pleased to see that a new pavilion is proposed to replace the current building which is no longer fit for purpose. The ECB would want to see compliance with our technical specification for pavilions and clubhouses (especially with regard to changing room location to provide line of sight to the playing area and changing room sizes) and those of Sport England

especially with regard to accessibility. We would highlight that the proposed location of the new building is a considerable distance from the cricket playing area.

The following documents are attached:

- ECB Approved Systems
- ECB Guidance on Installing Non Turf Cricket Pitches
- ECB Pavilions and Clubhouses
- ECB Senior Pitch Size
- Sport England Accessible Sports Facilities
- Sport England Successful Management of Dual Use Cricket and Football Sites

The Football Foundation (FF) on behalf of the FA advise that the adjacent (current) football site is known as Palmer Road Recreation Ground. This site has 2 adult & 2 youth pitches. Three different clubs use the site, with a total of 7 adult male teams, 1 adult female team, 3 youth male teams and 4 youth female teams

The Local Football Facility Plan (LFFP) identifies the site (Palmer Road Recreation Ground) as the highest priority rated project for a full size floodlit 3G football turf pitch (FTP), improvement to the four grass pitches and new changing facilities. The LFFP notes the venue as a key site for football and ideal to alleviate the current 3G FTP shortfall in the east of the local authority area. This LFFP was carried out in consultation with local football clubs

Rather than provide, 2 new full size grass pitches, consideration should be given to provide a 3G football pitch.

Football Foundation, on behalf of The FA are supportive of the principle of new football facilities. However, consideration should be given to alleviating the existing 3G FTP shortfall in the area [as set out in the LFFP].

Conclusion

This being the case, Sport England offers its general **support** for this this application, as it is considered to meet Objective **PROVIDE**. But we have advice and guidance on the future provision that needs to be considered to ensure a fit for purpose development for sport.

The absence of an objection to this application, in the context of the Town and Country Planning Act, cannot be taken as formal support or consent from Sport England or any National Governing Body of Sport to any related funding application, or as may be required by virtue of any pre-existing funding agreement.

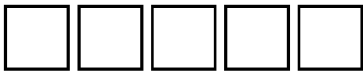
If this application is to be presented to a Planning Committee, we would like to be notified in advance of the publication of any committee agendas, report(s) and committee date(s). We would be grateful if you would advise us of the outcome of the application by sending us a copy of the decision notice.

Yours sincerely

Gary Parsons MSc MRTPI
Planning Manager

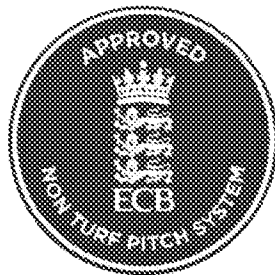


#FITGOTREAL



We have updated our Privacy Statement to reflect the recent changes to data protection law but rest assured, we will continue looking after your personal data just as carefully as we always have. Our Privacy Statement is published on our [website](#), and our Data Protection Officer can be contacted by emailing [Erin Stephens](#)

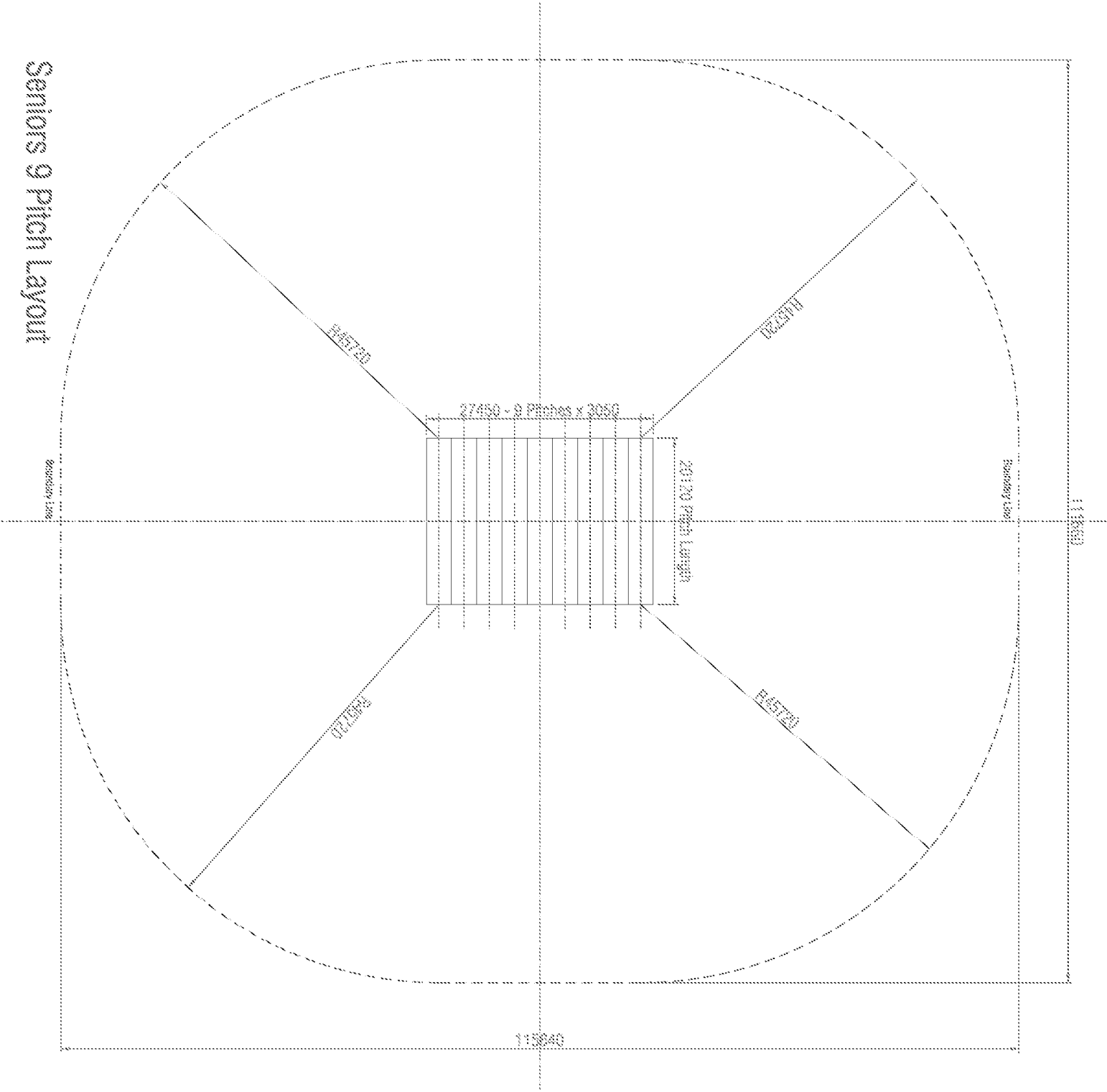
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ECB APPROVED NON-TURF PITCH (NTP) SYSTEMS

SUPPLIER	ECB APPROVED NTP SYSTEMS	CONTACT DETAILS
ClubTurf Limited 	ClubTurf International Pitch ClubTurf Natural Pitch	www.clubturf.com
Dura-Sport Limited 	DSI-pro Cricket System DSI-pro Vision Cricket System	www.dura-sport.co.uk
Exclusive Leisure Limited 	Cricketweave Hard Porous Synthetic Turf Pitch Cricketweave 'T' Base Synthetic Turf Pitch T10 'T' Base Synthetic Turf Pitch	www.exclusiveleisure.co.uk
Notts Sport Limited 	NottsBase [®] D System NG7 NottsBase [®] D System NG Ultra Envelope System [®] NG7 Envelope System [®] NG Ultra	www.nottssport.co.uk
total-play Limited 	total-play 'tp365' Synthetic Turf Pitch total-play 'tp 5T' Synthetic Turf Pitch total-play 'tp B1' Synthetic Turf Pitch	www.total-play.co.uk
Verde Sports (Cricket) Limited 	Premier System Synthetic Turf Pitch Test Match Synthetic Turf Pitch	www.verdesportscricket.com

Seniors 9 Pitch Layout





GUIDANCE NOTES FOR THE PROVISION
AND INSTALLATION OF NON-TURF CRICKET PITCHES
AND NET CAGE FACILITIES

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ecb.co.uk

Contents



01 Introduction

- 1.1 What is a Non-Turf Cricket Pitch or Facility?
- 1.2 Background
- 1.3 The ECB Approvals System

02 General Guidance

- 2.1 Orientation
- 2.2 Location
- 2.3 Risk Survey

03 Pitch Guidance

- 3.1 Design of Non-Turf Pitches
- 3.2 Classification
- 3.3 Types of Systems
- 3.4 Selecting a Pitch or Facility System
- 3.5 Installation
- 3.6 Quality
- 3.7 Unacceptable Facilities

04 Net and Cage Guidance

- 4.1 Performance of the System
- 4.2 Fixing of Nets
- 4.3 Billowing of Nets
- 4.4 Damage Caused by Rabbits, Foxes and other Animals
- 4.5 Tensioning
- 4.6 Roof Netting
- 4.7 Steel Works
- 4.8 Durability
- 4.9 Key Items to Consider When Selecting Net Cage Systems

05 Other Considerations

- 5.1 Warranties
- 5.2 Risk Survey
- 5.3 Training
- 5.4 Management and Maintenance
- 5.5 Evaluation

Appendix

- A. Level of Risk Survey

01 Introduction

1.1 What is a Non-Turf Cricket Pitch (NTP) or Facility?

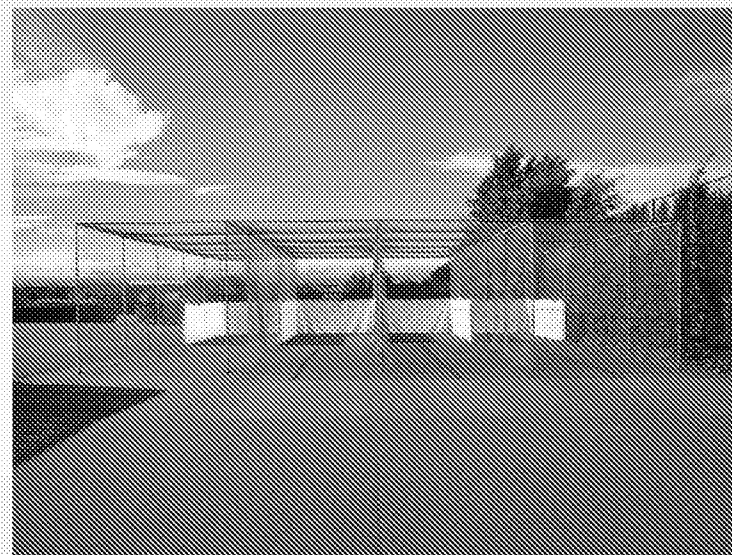
A Non-Turf Cricket Pitch or Facility is a pitch or facility that does not support vegetation and is designed to function without vegetation. It could be used in any situation in which a natural turf pitch or facility may be considered.

It would include a synthetic turf, rubberised or synthetic pad or carpet-like material laid on a prepared base of either bonded (concrete, tarmac, etc) or unbound mineral (hard porous interlocking or water bound material), soil or turf.

All play an important role in the "suitability for the purpose", however, with a non-turf pitch or facility, it is the manager who plays the most critical role. The maintenance is "a key factor" as to how long the non-turf pitch or facility lasts and is "suitable for the purpose".

There are three essential people to take into consideration in the provision of a non-turf pitch or facility - the Designer of the system, the installer of the system (contractor), and the Maintainer (who maintains the system once installed). No non-turf pitch or facility is maintenance free.

Experience and practical research indicates all non-turf pitches should last a minimum of 20 years and during this time they may require a new surface and perhaps an underlay but, with good maintenance, the base formation should be suitable for the purpose (See Section 3.4 - Selecting a Pitch or Facility System).



01 Introduction



1.2 Background

The bulk of the research on the current range of non-turf pitch systems (NTPs) was undertaken between 1975 and 1985, and, although some research has continued since, it has not been on the scale of the formative years. Supported by the National Cricket Association (NCA), the majority of the work was undertaken by Nottinghamshire County Council, in conjunction with Nottinghamshire County Cricket Club, who developed, amongst others, the first portable pitch which enabled Floodlit cricket matches to be played in football stadia in the 1980s.

The NCA first introduced the NTP Pitches Approval Scheme in the early 1990s. Six pitch systems were originally approved but one was taken off the market. Since 1995, an additional four pitch systems have been approved, making a total of nine approved systems, some of which are seeking re-approval. Pitch approvals last for five years after which the companies must reapply. It is important to bear in mind that it is the pitch system that is approved and not the company supplying the pitch.

The first Performance Specification for Artificial Cricket Pitches was introduced by the Sports Council in 1984, having been developed by a consortium comprising of RAPRA Technology, suppliers of cricket surfaces, many individual experts and the NCA. The work started in 1977 and was completed in 1980.

The NCA updated the specification in 1987 and introduced the NCA Performance Specification in 1990. Since then it has been updated a number of times, taking into account the research projects carried out at Lillleshall National Sports Centre and the NCA match pitch programme for the installation of pitches in the 1990s. An updated version of the specification, 'The Standard', was introduced in 2000. The latest version, entitled ECB Performance Standards for Non-Turf Cricket Pitches Intended for Outdoor Use (TS6) was produced in Nov 2007.

In addition to the many systems sold in the UK, pitches have been exported to New Zealand, West Indies, Sri Lanka, India, Pakistan, South Africa, Holland, France, Spain, Canada, United States, Ireland and others.

1.3 The ECB Approvals System

The ECB Approvals System has been constantly updated and is now used to ensure that pitches which have been shown to meet the requirements of "The Standard" are installed. This is important where financial grants are involved. The supplier of an approved pitch system must provide evidence of:

- (a) The quality of the facility to be installed having achieved the requirements of "The Standard".
- (b) The quality of the company supplying and installing the facility, which would include management practice, quality control, organisation, innovation, planning and logistics etc, plus the 'added value' provided by the company. A voluntary Code of Practice will be introduced in 2008 which companies can sign up to provided they meet the requirements set by the ECB.

The Community Club Development Fund (CCDF) programme (2004 to 2006) made a start by introducing quality control measures. In addition, the introduction of the 'ECB Employer's Requirements' provided a framework for the procedures involved in installing a pitch or facility.

02 General Guidance

2.1 Orientation

Where possible the facility should be sited in a north south direction to avoid batting or bowling into the setting sun.

2.2 Location

The siting of pitches in close proximity to trees should be avoided as trees create shadows which in sunny conditions make the ball more difficult to see.

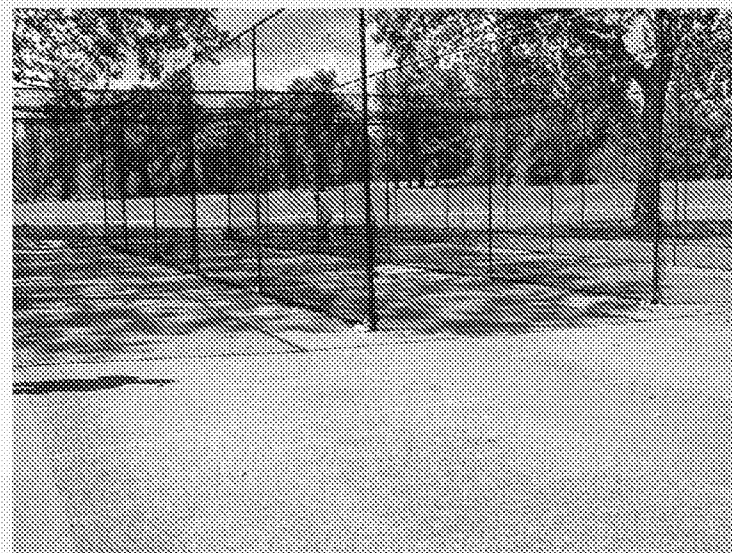
Buildings also create shadows and influence wind currents which may have an effect on the playability of the facility.

Sloping land and the terrain can have an effect on the quality of a facility.

The condition of the land on which the facility is sited has a bearing on the design and the extent of earth works required. The following should be considered:

- Is cut and fill necessary?
- Is drainage required?
- Has hard core and foundations to be removed?

A risk survey is a helpful tool in determining what can be achieved.



02 General Guidance

2.3 Risk Survey for the Installation of Practice Facilities

There are three main areas that need consideration, as indicated in the table below:

- (a) Safety of the proposed installation.
- (b) Quality of the facility.
- (c) Resources required and obtainable.

SAFETY	CONSIDERATIONS
Orientation	Direction of play should be north-south so as to avoid batting and bowling into the sun. This is particularly relevant in the evening and in the later stages of the season.
Trees (in close proximity to the facility)	These can create shadows across the playing surface as well as depositing leaves on the facilities.
Roads (in close proximity to the facility)	Roads create noise and the activities on the facility may create a safety hazard for drivers and pedestrians.
Buildings	Buildings create shadows, reduce light, intensify winds, reduce and increase the circulation of air, in the later creating an environment to encourage rust, rot, build up of organic matter, disease and other forms of decomposing fungi, and vegetation.
Paths	Paths in close proximity may put users at risk from balls and users may be a distraction for the facility users.
Ground Conditions (clay, sand, silt, peat water courses, slope and terrain)	The ground conditions have a major bearing on the provision of the facility as they influence the design.
Other Facilities	Facilities for all sports, play areas, gardens, woods etc may encourage people to be too close to the action for their personal safety.

02 General Guidance

QUALITY	CONSIDERATIONS
Pitches	The quality of the materials used within the structure of the installation, the quality of the workmanship, the playing performance quality and the quality of the pitch design are all factors that must be taken into consideration in the risk assessment.
Cage	The quality of the poles, sockets, cross members and other supports influence the durability of the facility and therefore its safety to users and spectators.
Nets	The quality of the netting and skirt influence the durability of the facility and therefore its safety to users and spectators.
Fixings	The quality of the fixings, ties, laces, brackets, concrete, pegs, and other fixings influence the durability of the facility and therefore its safety to users and spectators.
Design	In addition to the component parts, the design and layout of the facility plays a major part in the safety and durability of the facility.
RESOURCES	CONSIDERATIONS
Purchase	Availability of funds for the installation of the facility.
Regular Maintenance	A budget is required to fund man power, specialist skills, time and any other resources needed to ensure the facility is well maintained.
Annual Maintenance	The resources available funds, man power, specialist skills, time and any resource need to ensure the facility is well maintained.
Insurance	Funds, policy exclusions and any other influencing factors.

By using the table in Appendix A, it is possible for the club to determine the level of risk they are committing themselves to in the future and to determine a plan for the ongoing development of facilities at the club.

03 Pitch Guidance

3.1 Design of Non-Turf Pitches

Non-turf pitches can be divided into two main groups - Bound and Unbound.

(a) Bound is where the surfaces are laid on a structure that is bound together with a bonding agent like Bitmac, concrete etc.

(b) Unbound is where the surfaces are laid on a structure that is not bound and is held together by the interlocking and particle size distribution of the particles.

Unbound has the ability to absorb moisture and alter the playing characteristic of a pitch more readily than a bound structure, therefore, it plays similar to a good natural turf pitch with changeable playing characteristics influenced by the moisture content in the base formation.

Soil is an unbound structure and pitches that use a clay base provide the nearest playing performance to a grass pitch, they do however require the highest maintenance inputs.

This information should be only used as a generalisation as designers may well have their own method of meeting the ECB Performance Standard and providing a pitch that plays like grass.

There are a number of designs which have been shown to meet the criteria as laid down within the ECB Standard but may not be an approved ECB system, therefore, they would not be recommended by ECB.

Research has shown designers may adjust the performance of a pitch by adjusting any one of the following:

(a) The surface

(b) The underlay or underlays

(c) The upper supporting layers

(d) The upper base formation

(e) Lower base formation (if required)

(f) The length, stiffness and formation of the synthetic turf pile.

(g) The depth, stiffness and composition of the surfacing components and underlays.

(h) The composition and depth of the supporting layers.

(i) Introducing an underlay or additional underlays between the surface and the supporting layers.

(j) Altering the length of the synthetic turf pile, making it erect and increasing the density. Earlier pitches required a pile length of no greater than 6 mm as in the earlier days the longer the pile, the more the playing characteristic were affected. This is no longer applicable with recent surface introductions as long as the pile does not flatten significantly.

03 Pitch Guidance

- (k) Altering the depth of the supporting layers, i.e. reducing the depth of concrete from 100 mm to 70 mm. A similar situation is applicable to Bitmac.

3.2 Classification

Practical research during the past 25 years has shown the top 100 mm of a non-turf pitch influence the playing performance. The ability of this zone to absorb moisture is a major factor in determining how a pitch plays.

The number and depth of moisture absorbing components in the zone affect the extent to which a pitch performs, thereby providing the nearest comparison to a grass pitch. It is the combination of components and the extent to which they are affected by moisture that determine “the changeability” in a pitch in the same way as a grass pitch is affected.

Based on the ability of the structure to absorb or be affected by moisture the playing performance of a pitch is classified as either totally dynamic, semi dynamic, totally static or semi static.

03 Pitch Guidance



3.3 Types of System

TYPE OF SYSTEM	PLAYING PERFORMANCE & MAINTENANCE IMPLICATIONS
1. Double Performance Pad System	
Synthetic turf laid on two performance pads over soil, especially clay loam, angular interlocking sand or closely mown turf on a cricket square.	Plays like a good grass pitch, the nearest to natural turf of the systems, however, few companies are willing to supply because of the levels of maintenance required.
2. Double Performance Pad System	
Synthetic turf laid on two performance pads over unbound mineral material.	Plays like a good grass pitch but requires maintenance from time to time. (APPROVED SYSTEM)
3. Single Performance Pad System	
Synthetic turf laid on a performance pad over unbound mineral material.	Plays like grass but requires maintenance on a regular basis. (APPROVED SYSTEM)
4. Single Performance Pad System	
Synthetic turf laid on a performance pad over unbound mineral over a stone base formation.	Plays like grass but requires less maintenance. (APPROVED SYSTEM)
5. Single Performance Pad System	
Synthetic turf laid on a performance pad over a bound base (Blitmac) over a stone base formation.	Plays within the parameters found on a good grass pitch and does not require the same maintenance inputs as pitch systems 3 and 4. (APPROVED SYSTEM)
6. Unbound Mineral System	
Synthetic turf laid on unbound mineral over a stone base formation.	Plays similar to a grass pitch but requires the highest input of maintenance other than system 1. (APPROVED SYSTEM)

03 Pitch Guidance



The highest maintenance input system is a synthetic turf laid directly onto unbound mineral, followed by synthetic turf laid on a single pad over unbound mineral.

The lowest maintenance system is a synthetic turf laid on a pad over a bound layer (Bitmac) laid on stone, followed by a synthetic turf on a double pad (one of which is impervious) system over unbound mineral.

There are ten pitch systems currently approved by ECB.

- Two companies market a double pad system over unbound material.
- Four companies market a single pad system over unbound mineral.
- Three companies market an unbound mineral system.
- One company markets a single pad system over bound base.

From the information provided by the companies, Clubs and organisations should decide which type of system meets their requirements and specify the names of the approved systems (not the company) when obtaining estimates or quotations, which must include all works.

03 Pitch Guidance



3.4 Selecting a Pitch or Facility System

When deciding on a pitch or facility system, the process should be divided into two:

- (a) What is the condition of the ground on which the pitch or facility is to be installed?

This includes: the levels (slope, undulations, etc), what is in and on top of the ground at the present time (trees, undergrowth, buildings, foundations, rubbish, brickbats, industrial waste, saturated soil, vegetable topsoil, sand, limestone and many more). What the facility is built on can affect the quality of the playing performance. Drainage of the site plus the surrounding land, location of trees, hedges, bushes, their type and potential root span, age of trees etc, have a bearing on the success of the facility.

- (b) What system design is suitable for the application, bearing in mind the following?

Who will be using the facility? What the facility will be used for - match play, practice, mini games, fitness, coaching, etc? All have a bearing on the systems under consideration. Does the playing performance mimic the performance of a good grass pitch and to what extent?

Selection of the base formation is an important issue in the practical application of a system, e.g. for match play, a concrete base has to be installed on a relatively flat site, otherwise considerable expense may be incurred in marrying the outfield and surrounds with the pitch surface.

The difference in hardness between a concrete slab and natural turf can also be dangerous on a match pitch, especially if the concrete does not have a cushion layer laid over it. Timber edgings can also be dangerous unless lower than the pitch surface and preferably surfaced with soil.

Bitmac and concrete based pitches normally require less maintenance than unbound mineral based pitches, but if the base moves, it is more difficult to repair and may need removing altogether, whereas the unbound mineral can be easily repaired with the minimum of expense and such pitches usually mimic the playing performance of a clay based grass pitch.

The rationale for considering all of the above is to present the contractor with as much information as possible so that the most appropriate design can be achieved.

In assessing quotations and design recommendations, you should expect to receive from each contractor a statement on:

- Levels.
- The most compliant design and product (including all additional enabling work).
- The extent of the management and time involved in maintaining the chosen product.
- A site investigation report with recommendations.
- An indication of any sub contracted elements (security fencing etc).

03 Pitch Guidance



Once you have agreed a design you should seek to enter into an agreement that is based on the ECB Employer's Requirements or other similar arrangement. This type of document offers the club a clear undertaking as to responsibilities and liability throughout the contract work phase and the warranties and management beyond. This agreement should be signed prior to any work being undertaken or any money being paid to the contractor.

ECB strongly advises Clubs, Local Authorities and other organisations to EMPLOY either a competent expert on the subject or a company with an ECB Approved Pitch System to assist in the design and build process.

3.5 Installation

The temptation is to either attempt to install pitches on a self help basis or to employ a local builder to install the base formation and/or the supporting layers with the club or owner fitting the underlays and surfacing.

This is not encouraged by ECB as the skills required and the quality of the product has shown that only skilled, experienced personnel should install pitches under the control of the designer or the supplier of the system.

If a club wishes to install a pitch they should only do so if they employ the designer or the supplier of the system to supervise and check the installation is installed correctly.

The ECB prefer clubs to purchase from the designer or supplier of the system.

3.6 Quality

The quality levels to which a facility should be installed can be found in the ECB Code of Practice and the ECB Performance Standards for Non-Turf Cricket Pitches intended for Outdoor Use (Nov 2007).

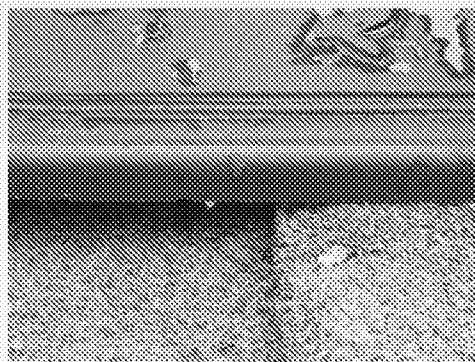
These indicate the limits within which a facility should be installed, the quality of the materials used and the checks the installer should carry out during the construction.

03 Pitch Guidance

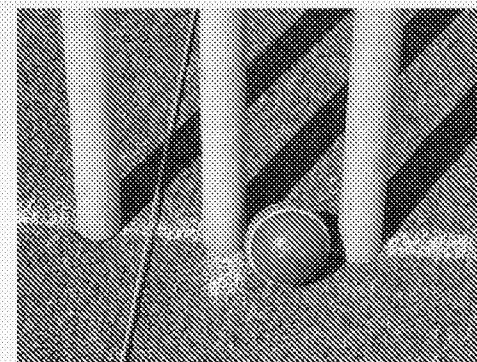
3.7 Unacceptable Features on Pitches



A match pitch manning in to the surrounding ground. However, in places the outfield should have been lifted.



Unsatisfactory joining of surfaces.



The stump holes are outside the limits specified.



Match pitch contours unacceptable.



Bowlers run up not married into the surrounding ground.

04 Net and Cage Guidance

All systems should conform to the ECB Performance and Technical Standards for cricket practice nets, cages, and supports and security fencing, as they appear from time to time.

4.1 Performance of the System

The system should prevent balls from going under, over, round or through the structure of the netting and cage / supports.

4.2 Fixing of Nets

The nets should be fixed to the posts and horizontal cross members or cables with an appropriate means either with ties, flexible clips, line wires, ropes, laces and any other flexible means.

Stiff plastic ties used for gardening, DIY and fastening things in a permanent manner should be avoided because they can soon cut through the individual sections of the netting. Only where there is no strain on the netting should they be used.

4.3 Billowing of Nets

Perhaps one of the biggest failings of clubs and organisations selecting a net and cage system is a lack of understanding as to the extent of billowing that occurs when a ball impacts on a net. Billowing can range from as little as 300 mm to 1.8 metres, depending on the

system selected, which is governed by the extent of the slack in the system (the amount of netting greater than the length required which is surplus to requirements and lays on the ground).

In some systems a rope is used to keep the net in position, whilst with other systems weighted poles, tight lines, surface fixings like pegs, particularly outdoors, are considered to be the solution.

Billowing can occur when the ball hits the net, players run into the net and strong winds blow the nets out of position. The amount of billowing must be controlled in the interests of safety and the functionality of the system.

4.4 Damage Caused by Rabbits, Foxes and other Animals

A skirt is a way of protecting the bottom of the net from damage and it can also help to reduce billowing.

4.5 Tensioning

Tensioning also helps in reducing billowing but needs very careful consideration if the club are to maximise the use of the facility. By ensuring the net is controlled at an optimum position, greater use can be made of the facility at all times despite the variation in weather conditions. If the net is taught it can act as a sling with the ball being quicker off the net than when it impacted on the net. When select a

04 Net and Cage Guidance

net system detailed discussions should be held with the Suppliers who should take the Club's user requirements in to consideration and demonstrate how their system is the most appropriate for the Club's needs.

4.6 Roof Netting

The netting used for the roof should be fastened to the vertical nets in such a manner that balls do not pass between them.

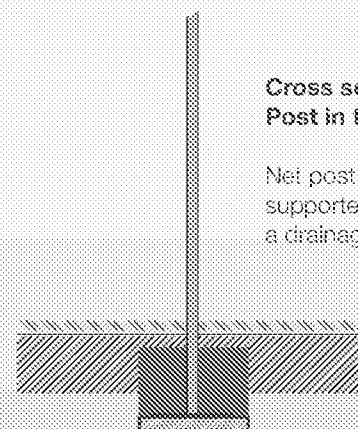
4.7 Steelwork and Supports

All steel work should be robust enough for the job including players and equipment running into the frame. All posts should be typically, a minimum diameter of 42.3 mm with a 3 mm wall thickness set in concrete to a depth of no less than 475 mm in the ground on a 100 mm stone drainage layer. The designer should be aware of the strain the structure must be capable of sustaining and design accordingly taking into consideration ground and climatic condition, type and levels of use which should form part of the site investigation before submitting a scheme.

A net/cage system shall be no less than 3.6 metres wide by 18.3 metres long and 3.6 metres high and the roof netting shall cover the entire cage with no gaps where a ball can pass through. Within the net, in the interests of safety, the stumps should be positioned 1.5 metres from the back netting.

4.8 Durability

The steel work and the netting on all types of systems must be to the correct strength and installed to a suitable design for the "purpose intended", bearing in mind prevailing winds, strength and stability of soil on the site concerned, the maintenance required to maintain the structure and the life expectancy it has been designed for.



Cross section of a Net Post in the ground.

Net post in the ground supported by concrete on a drainage raft

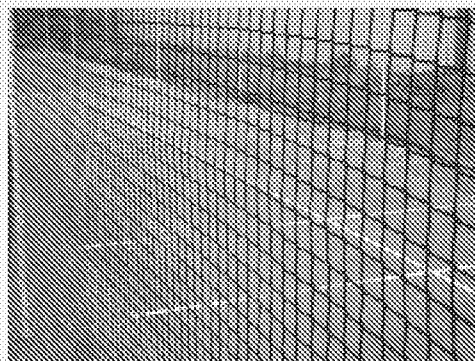
The cross member should be fixed securely to the uprights by a fixing which will not part in service. Cross member has come out of its socket due to poor design, installation, pressure on the structure (winds, vibrations, players leaning on the cage, vandalism or other means) poor maintenance or neglect on behalf of the facility owner. There are a host of reasons and it is essential the owner is fully conversant with the upkeep of the structure once installed. All companies should provide management and maintenance instructions and as appropriate training if requested by the owner.

04 Net and Cage Guidance

4.9 Key Items to Consider When Selecting Net Cage Systems



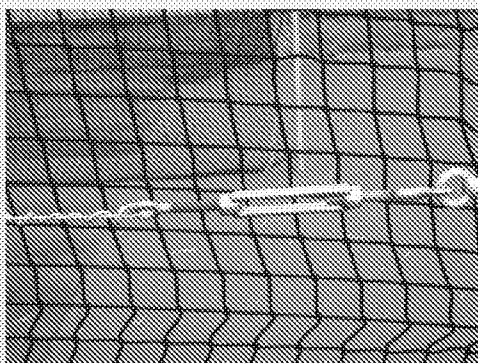
A cross member that has become detached.



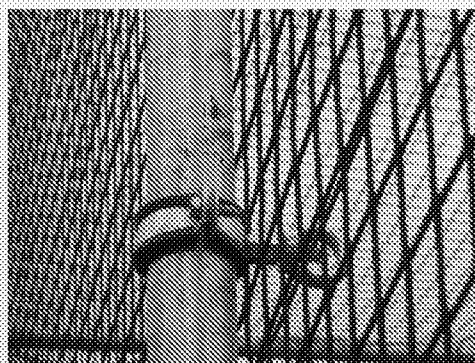
Tension wire ready for fastening to the net to reduce billowing.



A rodent protection skirt on the outside of the net.



Fixing holding the tension wire for reducing billowing.



Intermediate fixing for holding the tension wire to avoid drilling which may weaken the post.

05 Other Considerations

5.1 Warranties

It is important to obtain warranties for the entire system and the individual component especially the netting and the extent to which the netting remains under warranty especially the maintenance implications.

5.2 Risk Survey

When considering systems it is a good idea to carry out a risk survey, as indicated in the Appendix.

5.3 Training

It is advisable for at least two people from an organisation or club to attend courses on the installation, management and maintenance of non-turf cricket facilities. Further details of courses can be obtained through the Institute of Groundsmanship (www.ig.org).

5.4 Management and Maintenance

The installer and the supplier should make the owner and the appointed representative fully aware of how to maintain and manage the facility. This includes training and providing a detailed Code of Practice for the facility.

5.5 Evaluation

When selecting a system it is important to evaluate what is available and how long the facility will last. Numerous methods of evaluation have been used over the years. The most simplistic has been to take the total costs of installation, plus the management cost, divided by the potential usage (See Example 1):

Example 1:

Period of time the facilities will be used before a new top structure is required 10 years.

Cost and Usage Per Annum

(One net facility)

Installation cost:	£6,500
Management cost:	£1,500 per annum
Usage (adult) per annum:	1600 user hours

Total Cost over Ten Years

Installation cost:	£6,500
Maintenance cost:	£15,000

Total Cost:

Usage:	£21,500.00
	1600 user hours x 10 = 16000

£21,500.00 divided by 16,000 user hours = £1.34 per user hour.

Note: A user hour is one person for one hour. (Figures based on work carried out for Sport England).

Further details on the information contained in this document can be obtained from the ECB Funding & Facilities Unit at facilities@ecb.co.uk

APPENDIX A - Level of Risk Survey

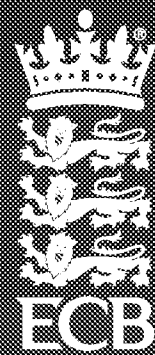
Requirement	1 Very Low	2 Low	3 Medium	4 High	5 Very High
Safety					
Orientation					
Trees					
Roads					
Buildings					
Paths					
Ground Conditions					
Other Facilities					
Quality					
Pitches					
Cage					
Nets					
Fixings					
Design					
Resources					
Purchase					
Regular Maintenance					
Annual maintenance					
Insurance					

Possible Sources of Information:

Safety: Club members, club officials, ECB officials and expert advisers.

Quality: The designer, supplier and ECB officials and expert advisers.

Resources: Club members, club officials, the designer, supplier and expert advisers.



Pavilions and Clubhouses [TS5]

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Contents

01. **Introduction**
02. **Planning the project**
03. **Cost, value and time**
04. **Site planning**
05. **Building planning and design**
 - 05.1 - Accommodation
 - 05.2 - Furniture and fittings
 - 05.3 - Security
 - 05.4 - Materials and finishes
06. **Services**
07. **Environmental sustainability**
08. **Regulations and guidelines**
 - 08.1 - References and bibliography
09. **Appendix A – Feasibility study**
10. **Appendix B – Consultants**

01. Introduction

This document is one of a series of technical specifications for cricket accommodation and pitches produced by the England and Wales Cricket Board (ECB). The aim of this guide is to provide practical advice for cricket club officials and designers when planning pavilions and clubhouses. It applies to new buildings and alterations to existing facilities.

Planning

The information in this document is relevant when the accommodation serves cricket exclusively or as part of a mixed-sport facility. It should be read in conjunction with Sport England guidance notes and, when part of a shared facility, the guidance notes of the relevant sports national governing bodies (NGBs). The main points to be addressed when planning pavilion and clubhouses are set out and there is a mixture of information that should be followed closely and advice where the solution could be more fluid.

What makes a good pavilion

There are many aspects to a good pavilion but mainly it should serve the current and future needs of the club, players, officials and spectators of all ages, culture, ability and gender. It should also be attractive, high quality, efficient, economical to maintain and give value for money.

Addressing issues such as design, site, orientation, composition, accommodation, size and arrangement of spaces, flexibility, sustainability, energy performance, materials, robustness, security and costs will make the best use of available money and guide the project towards a successful outcome.

Additional guidance

This document will be supplemented by a picture gallery on the ECB website (www.ecb.co.uk) illustrating different aspects of pavilions and clubhouses ranging from whole buildings in context to detailed elements within a building. The three dimensional illustrations that interpret the advice in this document and selected photos of built projects are intended to show excellent buildings that have been well-designed to respond to local influences.

Who was involved in preparing this document

Bruce Cruse
ECB Facilities And Funding Manager
Who develops and administers grass roots designs and programmes within the ECB's remit and its capital expenditure.

David Morley Architects
Designers with experience of multipurpose sports halls, pavilions and centres of excellence for cricket.

Club Design Limited
Experienced in sports project co-ordination, clubhouse design and applications to funding bodies.

John Austen Associates Limited
Quantity surveyors and cost consultants with experience of cricket pavilions and other sports facilities.

Paul Bedford
Surrey Cricket League Chairman
And Head Of Non-First Class Cricket
Experienced in managing sites and sports facilities.

Chris Wood
ECB Pitch Consultant

Dr Andrew Lewry
Building Research Establishment (BRE) Sustainable Energy Group

This document has also been circulated for comment to Sport England, the Football Association (FA) and the Rugby Football Union (RFU).

02. Planning the Project

This section provides guidance on planning and developing your project and summarises the design and building process.

Work stages

The Royal Institute of British Architects (RIBA) uses a plan of work to set out five main stages for building projects: preparation, design, pre-construction, construction and use. The main stages are sub-divided into smaller work stages A to L as summarised below. These are usually carried out in sequence.

Main Stage	Work Stage	Brief description
Preparation	A Appraisal	Feasibility study and appraisal enables a client to decide whether to proceed. See appendix A. Key requirements, constraints, procurement method and consultants are identified.
	B Design brief	
Design	C Concept	Planning applications are typically (but not always) submitted at this stage.
	D Design development	
	E Technical design	
Pre-Construction	F Production information	Detailed information for construction followed by the building control submission. Preparation of information for issue to contractors to obtain tenders. Evaluation of tenders, potential contractors and specialists.
	G Tender documentation	
	H Tender action	
Construction	J Construction mobilisation	The contractor is appointed and needs time to prepare before starting on site.
	K Construction to practical completion	
Use	L Post practical completion	

Getting started

Carefully think about the aims of your project and ways to accommodate the current and future needs of the club, including how often the facilities will be used on a weekly and seasonal basis. Organise a project group and appoint a leader to act as the main point of contact for the club. The leader will be a key decision-maker so should have sufficient time to dedicate to the project.

Preparation – work stage A: appraisal

The first stage of a project is called appraisal. It is when a club's needs and objectives are identified along with the business case and any possible constraints on the development. Feasibility studies (see appendix A) should be prepared and the options assessed by the club to enable them to decide whether to proceed. Documenting some ideas and options with approximate costs can be done relatively inexpensively.

Assemble some useful information about your club, the existing facilities and the proposed project. For example:

- Business plan
- How the project will be funded and records of consultation with funding bodies and their feedback
- The site including address, details of the boundary and any rights of way
- Details of the freehold or leasehold, length of lease and security of tenure – in some cases this can take a while to obtain

- Information about the existing buildings or facilities, mains services and utilities, pitches and ground conditions, asbestos survey plan
- Access audit (a review of how the existing facilities can be approached, entered and used by everyone – all ages, genders, cultures and ability)
- Contact details for key club members
- Existing and future match fixtures and programme of use
- Sports development
- Other events or sports use – if the facilities are shared with other sports then refer to the appropriate guidance notes from the other sports governing bodies
- Outline schedule of accommodation
- Facilities for car parking and public transport links
- Records of early consultation with the local authority planning department, previous planning applications, review of planning guidance documents

As a point of interest, the majority of recent cricket pavilion projects have been the development of existing facilities via grant funding.

02.

Preparation – work stage B: design brief

The second stage of a project is design brief and this is when the key requirements, constraints, procurement route (see section 3) and consultants are identified.

The range of professional consultants and skills required will depend on the project size and its complexity. These will become apparent during the preparation stage although the design team will probably include an architect, structural engineer, quantity surveyor, mechanical and electrical services engineer. Under the Construction (Design and Management) regulations 2007, a CDM coordinator must be appointed to advise the client (the club) on health and safety issues from the design stage onwards. Some projects might also need specialist input, for example accessibility, environment, ecology, landscape architects, heritage and planning consultants or highways and transport engineers. If club members don't have sufficient time act as the main point of contact, consider using the services of a project manager to act on your behalf. See appendix B.

Design – work stages C, D and E

Once a project is underway and consultants are appointed, the lead consultant will guide you through the subsequent work stages. All work stages require client sign-off so allow time to review the drawings and reports prepared by the design team, carefully checking your requirements against the design. Early changes and requests are much easier to accommodate whereas late changes can have cost implications out of scale with the amendments.

The design stage is divided into three: C/ Concept, D/ Design Development and E/ Technical Design. Concept design is where outline proposals, specifications and cost plans are prepared and the procurement route (see section 3) is reviewed. The design is developed further in stage D and this is also when planning applications are usually submitted. Stage E is when the technical designs and specifications are developed sufficiently to coordinate all the different elements of the project.

Pre-construction – work stages F, G and H

The pre-construction stage is also divided into three: F/ Production Information, G/ Tender Documentation and H/ Tender Action. Production Information is when detailed information for construction is prepared and submitted to building control for approval (see section 3). Tender documentation is the preparation and collation of sufficient information to enable tenders to be obtained. In this instance, a tender is an offer by a contractor to execute the work at a fixed price. Tender action is when potential contractors and specialists are identified and evaluated, then invited to prepare tenders. Once tenders are obtained and appraised, the design team will submit their recommendations to the client. Compiling the list of potential contractors will often start well in advance of the tender period.

Construction – work stages J and K

The construction stage is divided into two: J/ Mobilisation and K/ Construction. Mobilisation is when the contract is let, the contractor is appointed, construction information is issued to the contractor and the site is handed over by the client. The contractor will need time to prepare before starting on site, for example they will organise their construction team, place orders for materials and arrange sub-contracts. Construction is when the contract is administered and the building is built (or refurbished as applicable). The design team will issue further information to the contractor if required and also review information prepared by the contractor or any specialists (for example specialist kitchen equipment or bespoke furniture).

Use – work stage L

The final stage is using the new facilities. The completed building is handed over to the client and the contractor leaves site. Some contract administration takes place after practical completion including making final inspections after the defects liability period. The building users might require some assistance during the initial occupation period, for example training for maintaining the building services or setting alarms. Often the design team will want to review the building performance in use or take photographs.

Getting support

The ECB funding and facilities unit should be your first point of call for advice (facilities@ecb.co.uk). Make contact with them during work stage A, show them your feasibility study and gauge their support. Consulting the ECB at the earliest opportunity allows their input to be more valuable. Funding and planning permission are two important hurdles in the preparation and design stages of a project. The ECB regional funding and facilities manager will assess the proposals for technical compliance, sports development and financial affordability.

02.

Successful clients

The Commission for Architecture and the Built Environment (CABE) publication *Creating Excellent Buildings* describes how to be a successful client:

"Each development project is unique, with special local conditions for site, use patterns and social context. However, all projects need well structured project management and can benefit from the ten key ways the client can help achieve design quality."

1. Provide strong client leadership
2. Give enough time at the right time
3. Learn from your own and other successful projects
4. Develop and communicate a clear brief
5. Make a realistic financial commitment from the outset
6. Adopt integrated processes
7. Find the right people for the job
8. Respond and contribute to the context
9. Commit to sustainability
10. Sign off all key stages

"As noted before, all work stages require sign-off so allow time to review the drawings and reports prepared by the design team, carefully checking your requirements against the design."

Local community

Good communication with the local community is important. Potentially it could lessen objections to your planning application and help towards a smooth relationship with neighbours before, during and after construction. People can be sensitive to change so it's worth finding ways to keep neighbours informed. This could have surprising and beneficial results – one club arranged temporary contractor's access through adjacent land which made larger deliveries possible and shortened the construction period. Good links with the local community also provides the opportunity to make contact with new members.

03. Cost, Value and Time

Buildings have a value as well as a cost. An efficient and well-designed facility is an asset in addition to simply performing its function. Aim to get the best value by carefully balancing the desired quality of the finished building and the cost of designing, building and running it against the time taken to get from the first idea to the building being ready for use.

Since quality, time and cost are inextricably linked, avoid setting over-optimistic (or unrealistic) timescales as inevitably this will affect the project's cost or quality. It's better to spend time getting things right at the preparation and design stages as later changes to the brief will have more impact and could lead to expensive remodelling in the future.

In addition to the cost of engaging a contractor to build the pavilion, there are many other items that incur fees or affect costs. Some of these are listed below:

Phasing

It is possible to plan a small pavilion with scope for future expansion, or to carry out the work in several phases but this should be appraised in the preparation stage and feasibility studies.

Maintaining use of existing facilities

If you intend to maintain use of existing facilities while extensions or alterations are carried out, the cost of phasing the project and any temporary accommodation, screens or hoardings and other health and safety measures should be

taken into consideration. Alternatively, if you move off-site during the works and the construction programme overlaps with the cricket season, you could consider either missing a season or consult the league regarding the possibility of sharing premises elsewhere.

Surveys

A topographic survey and measured survey of the existing facilities will be required in some cases. These could be carried out during the preparation stage if funds are available, or at an appropriate time in the design stage. Site levels can be used advantageously to enhance the design.

Site investigations

Abnormal ground conditions will affect the foundation design and costs. The structural engineer will advise if trial pits are required in the design stage.

Professional fees

Professional fees should be budgeted to cover the services of a design team and specialists – see appendix B.

Planning approval

Planning applications incur a planning fee which is payable on submission to the local authority.

Planning requirements

Check if the local authority has planning requirements with cost implications. Some local authorities have a policy to reduce carbon dioxide emissions and require a percentage of the proposed building's energy supply to be provided by on-site renewable energy. This is known as the Merton rule -- see section 7 sustainability.

In conservation areas there is often a requirement to protect or enhance the surroundings which could influence the selection of proposed external materials.

Building control

Building regulations approval can be obtained via the local authority building control department or through an independent approved inspector. The local authority has a plan charge payable with the building control submission and a separate inspection charge that will be invoiced during construction.

Upper floors

There are costs associated with having upper floors including lifts and stairs or ramps with handrails as well as emergency exit for from the upper floors. The structure supporting upper floors requires fire protection.

Furniture, fixtures and fittings

Changing room benches and coat hooks on rails are normally sufficient for changing rooms in cricket pavilions and clubhouses. If lockers are required then the cost and space requirements should be accounted for. Bear in mind the cost of loose furniture such as tables and chairs.

Refreshments and catering strategy

The specification of bar and kitchen equipment will depend on the catering strategy -- a full bar with cellar and a commercial kitchen is quite different in scale and equipment to a beer fridge and domestic-type kitchen suitable only for preparing hot drinks and serving pre-prepared food so should be considered carefully at the outset. Bear in mind the cost of crockery, glasses, cutlery, pots, pans and other kitchen equipment.

Alcohol license

Under the Licensing Act 2003, licensing authorities in England and Wales (usually the local authority) are responsible for licensing the sale and supply of alcohol. Clubs must apply for an appropriate license (most likely a club premises certificate) if they want to supply or sell alcohol at their clubhouse. Refer to the department of culture, media and sport (DCMS) website for more information including guidance on applications, fees and annual charges. www.culture.gov.uk/what_we_do

External works

The costs of external works will depend on site levels, the extent and specification of paving, proposed fences and boundary treatment as well as landscaping and planting proposals.

Deleterious materials

Asbestos was used as a building material in the UK from the 1950s and any building built before 2000 might contain it. Asbestos comes in a variety of forms for different uses and was considered ideal for fireproofing and insulation. Other typical examples are floor and ceiling tiles, textured coatings, textiles and asbestos cement products. Asbestos materials in good condition are safe until the fibres become airborne which happens when it's damaged. Under the Control of Asbestos Regulations 2006, an organisation responsible for the maintenance of non-domestic premises has a legal duty to take steps to find out if there is any asbestos in those buildings. If so, the amount of asbestos, its location and condition should be recorded. There is also a duty to assess the risks of being exposed to asbestos fibres if it is disturbed, prepare a plan to manage the risk and to periodically monitor the plan. The club must provide this information to a contractor or anyone who is likely to work on the buildings. Refer to the health and safety executive website for more information.
www.hse.gov.uk/asbestos/essentials/building.htm

VAT

VAT is usually payable on construction costs, professional fees and building control charges and should be accounted for in the overall costs and cash flow forecast. VAT is not usually payable on alterations to listed buildings where listed building consent has been granted. The level of VAT payable might sometimes be reduced subject to the status of the club so check if there is a club VAT management plan. Don't assume all VAT will be recoverable – it is essential to obtain specialist VAT and partial exemption advice from an accountant with relevant experience.

Tax relief

The government has introduced an enhanced capital allowance (ECA) scheme to give tax incentives on water saving and improving technologies as part of its commitment to the reduction of carbon emissions. Under the scheme, businesses that pay corporation or income tax are able to claim one hundred per cent of their first year allowance against the cost, delivery and installation of water saving products, including taps and showers. All products that have the ECA water technology approved logo are eligible for the scheme.

Obtain independent advice from specialists before assuming eligibility for any tax relief schemes.

03.

Contingency

It's prudent to have a contingency allowance set aside for the design and construction stages to cover the cost of unforeseen items and design growth or changes that might arise during the project.

Funding

ECB booklets on sources of grant aid and funding can be downloaded from the ECB website, www.ecb.co.uk

- Sources of grant aid funding for cricket clubs in England
- Sources of grant aid funding for cricket clubs in Wales

Procurement routes

There are three main methods of procuring buildings in England and Wales:

1. Traditional is where design and construction are separate elements. A design team prepares design and construction information. Several contractors are invited to tender and then one is appointed to build the project. This method follows the linear pattern of work stages shown in section 2. Quality control is the key strength.

2. Design And Build entails a more integrated approach as the contractors tender before the construction information is complete so become involved during the design and preparation stages. The contractor is responsible for developing the design so cost control is the key strength but this can be at the expense of quality.

The work stages shown in section 2 still apply, but are not as distinct and some are carried out in a different sequence so design can continue while the contractor is working on-site. This parallel working can save time but puts quality at risk.

3. Construction Management is when either a client or contractor assumes a central management role and responsibility.

This is a simplified explanation of procurement methods and there are many variations and hybrids of the main types including single or two stage tenders, partnering arrangements, public private partnerships and private finance initiative (PFI) or even self-build. However, self-build is only suitable if club members have sufficient building skills and qualifications and are willing and able to carry out the work. The most appropriate method will depend on the nature and scope of works, how the risks are allocated, design responsibility, coordination and the basis of costs. The final choice could also be influenced by a funding body.

04. Site Planning

Site analysis

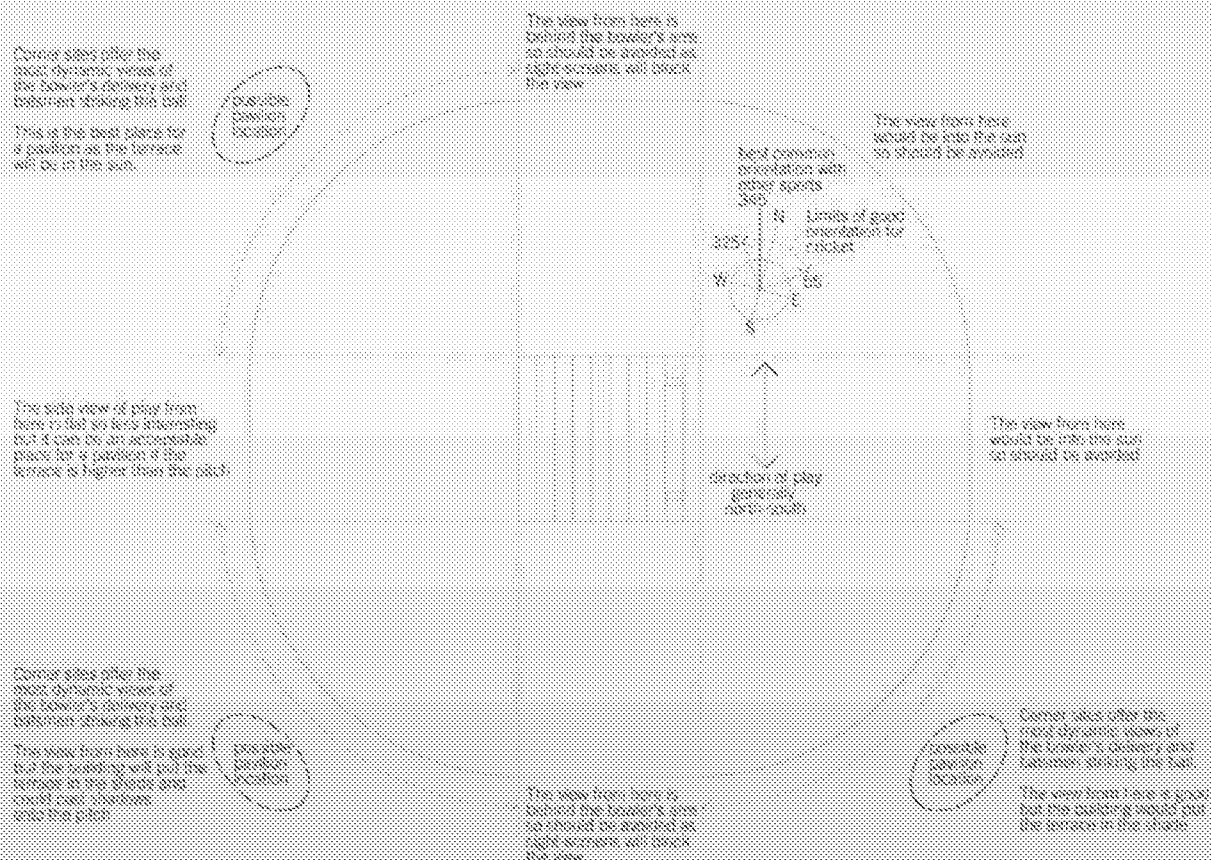
The individual circumstances of each project will influence the design. A logical approach to site analysis should be adopted when deciding the best location for a pavilion or clubhouse. Taking advantage of the natural elements and surroundings such as trees, gradients, views and orientation will help make the most of the site. The shape and contours of the land will affect the final location, as will proximity to services and main road access. The availability of land for car parking, any future expansion and space for temporary facilities need to be taken into account during early stages. Tenancy and ownership of the land, statutory planning restraints and rights of way are vital to early discussions and will minimise wasted time and money later on. Another key item is the composition of elements, including the relationship of the cricket table to changing rooms, viewing areas, scoreboard and grounds store.

Pavilion location

Corner sites offer the most dynamic views for spectators and waiting batsmen, giving full context of the field and the best perspective for watching the bowler's delivery and batsmen striking the ball. The best one of these is the north-west corner as the area in front of the pavilion will be in the sun; parasols or awnings can be used to provide shade on hot days. The south-west and south-east corners also give great views of the game but any viewing terrace in front of a pavilion here will inevitably be in the shade of the building for part of the day. The view from the north-east corner of the pitch will be into the afternoon sun and should be avoided, but be mindful that tall buildings, hills and trees around site will affect where the sun sets.

It's not good practise to put the pavilion to the north or south of the pitch as this is directly behind the bowler's arm. Sight screens occupy the area parallel to the batting crease and are moved regularly depending on the wicket in use and the batsman's preference. As you might expect, these could obstruct the view. Other possible pavilion areas are to the east and west. These give a flat side view of the field of play so are less interesting to watch cricket from, but should not be discounted entirely.

04.



Pitch orientation

The cricket pitch orientation should generally run north-south wicket to wicket but the axis can vary from 325 degrees (west-of-north) to 55 degrees (east-of-north). The best common orientation with other sports is 345 degrees. Refer to Sport England guidance for pitch orientation when the cricket outfield is part of a multiple-sport facility as the overlap with the ideal pitch orientation for other sports narrows the zone of flexibility.

Sun

Natural light should be incorporated into the design to create a pleasant environment – having the lights turned off during the day will also reduce running costs. Take account of the path of the sun to avoid over-heating from excessive solar gain. When altering existing facilities, it's not always possible to change the building orientation but the use of roof overhangs, blinds and solar-control glass could be considered to address any problems. Plan for the future by planting trees that give shade in summer but allow light through in winter while giving focus, depth and context to views.

Wind

The pavilion should be orientated away from the prevailing wind to give protection to spectators on the terrace. Opening windows and vents for natural ventilation should be carefully placed to avoid possible sources of pollution such as car parks.

Height above pitch

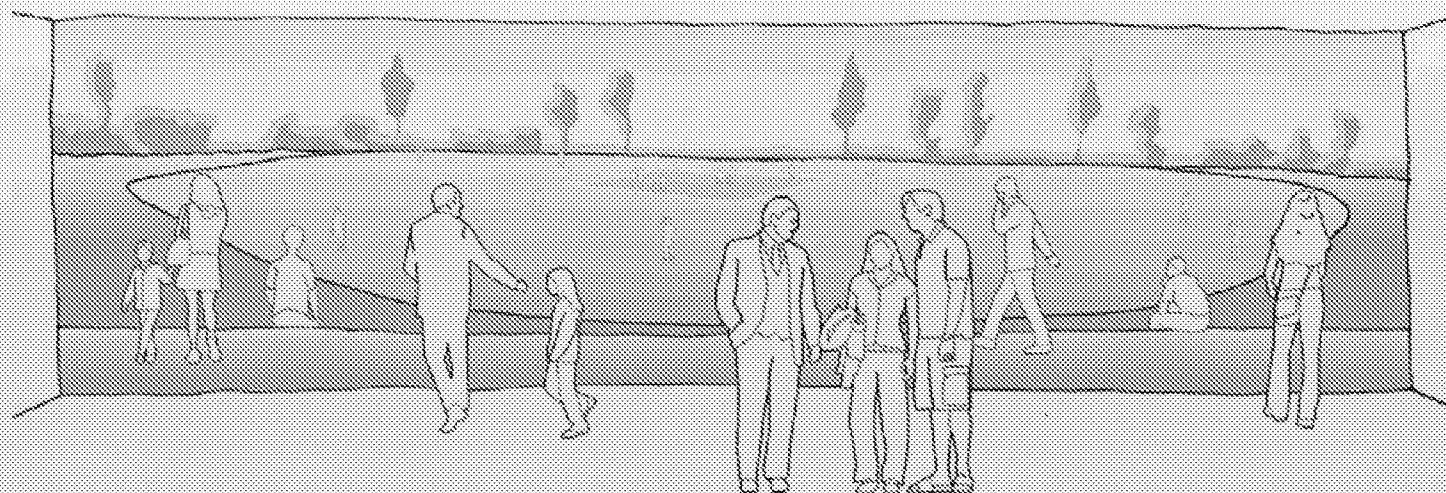
In first class cricket the players are sometimes separated from the spectators in a first floor viewing gallery, but this might not be appropriate for club cricket which is often more social and inclusive. However, it is possible to use the site topography and gradient to your advantage by positioning the pavilion so it is raised above the field of play, giving advantageous views to both players and spectators while remaining welcoming and inclusive. It can also be cheaper to retain earth on site than sending it away as spoil. This should be balanced against creating easy access to the pavilion and pitch especially where wheelchair-cricket will be played. It could also be difficult manoeuvre heavy equipment up or down slopes to the grounds equipment store.

Views

Players and spectators should be able to see the pitch from the social space inside the pavilion. If the pavilion is raised up above the pitch level then consider full height glazing or a low window sill that preserves a view of the pitch. If the window sill is too high, you won't be able to see the game from inside the pavilion.

Scoreboard

The scoreboard should be visible to players, spectators, scorers and umpires. It could be an electronic scoreboard or mobile board instead of a scorers hut. Scorers need a base with good views of the pitch and umpires where they won't be disturbed.



04.

Shared facilities

Sometimes cricket clubs share their facilities with other sports: often rugby and football. Where facilities are shared, careful consideration should be given to laying out the pitches and protecting the cricket table during winter. You should also refer to the guidance notes of the relevant sports governing bodies.

Parking and arrival

The car park should be conveniently located while preventing glare from cars causing a nuisance to players and equally cars being damaged by stray cricket balls. It doesn't have to be adjacent to the road or clubhouse although there should be space for drop-off, deliveries and disabled users close to the building along with access for emergency services vehicles. If the car park is behind the bowler's arm then a suitable screen or fence will be required to minimise interruptions to play. Provide a suitable path with appropriate lighting if there is a short walk. The sequence of arrival from the road can add to the drama of the occasion – a glimpse of the building or controlled views from the road to a welcoming entrance. If signs are required, they should be clear, simple and logical. Refer to Sport England guidance on car parking and landscape design. http://www.sportengland.org/se_facilities_carparking.pdf

Transport options

The way people travel to the ground will be influenced by the location and public transport options. It would be useful to display current public transport information at the clubhouse and on the club website if applicable. While players with large kit bags are unlikely to arrive by bicycle, it is possible that junior players, spectators and umpires will require somewhere secure to lock bikes and a gathering point for

coaches could occasionally be required. The number of disabled parking bays is prescribed by the department of transport. At the time of printing, the number of disabled bays in car parks of up to 200 spaces should be three bays or six per cent of the total parking provision, whichever is greater. Always check current guidance at www.dft.gov.uk.

Landscaping

The soft and hard landscaping around the building can improve the quality of the setting and perform other functions like shelter from the wind. Plants can add texture and aroma that will give interest and delight. Sensitive landscaping with native species can enhance local biodiversity. Thoughtful selection of plants and carefully designed irrigation systems can dramatically reduce the need for watering. External surfaces in the vicinity of the building should be well drained and thoughtfully selected as light coloured paving can sometimes cause glare. Permeable surfaces will avoid problems with puddles, avoid the need for surface falls towards drains and reduce the storm-water surge in the surface water drainage system. Resin-bound gravel can be flexible enough to accommodate tree growth. Smooth surfaces are preferable for wheelchair users. Refer to Sport England guidance on car parking and landscape design.

http://www.sportengland.org/se_facilities_carparking.pdf

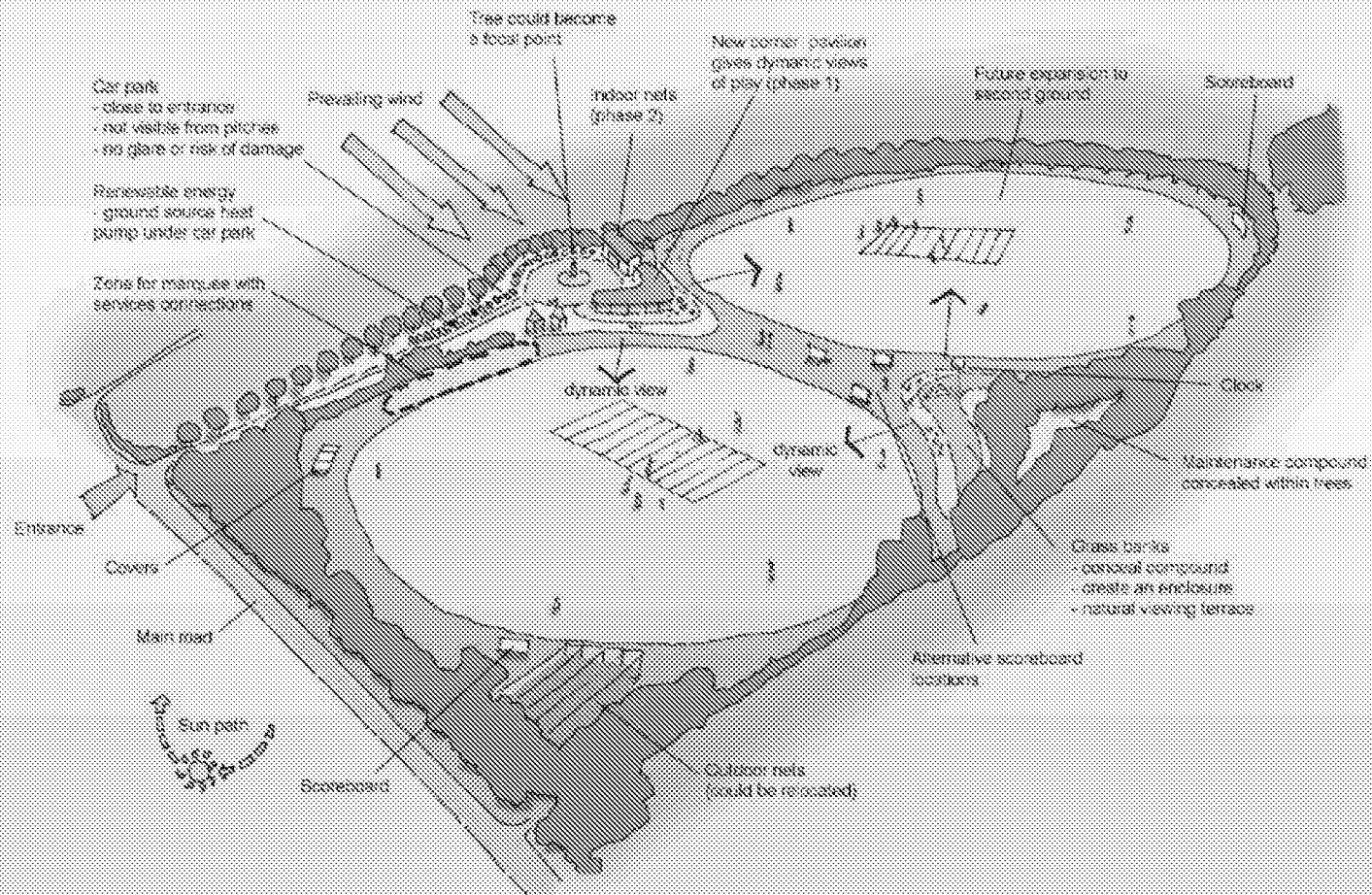
Advertisements

Occasionally cricket clubs raise funds by displaying advertisement boards around the pitch. The advertisement control system in England consists of rules made by the Secretary of State and falls under the Town and Country Planning (Control of Advertisements) Regulations 2007. An advertisement displayed on enclosed land is normally permitted to be displayed without an application. However, check with the local authority planning officer to confirm if consent is required especially if the proposed signs are visible from the road or public land.

Temporary accommodation for events

Consider identifying a location for temporary accommodation such as a marquee to be erected on the site that could occasionally be used for large events. Install appropriate external power and drainage connection points for convenience.

04.



The Masterplan

All relevant site and club issues can be addressed, combined and distilled into one master-plan. The master-plan is your opportunity to think about developing your club and site as a whole – it's the big-picture.

The intention is to capture your vision for the future. The masterplan should contain a statement of your aims and objectives and how you want to get there, supported by drawings or images that will help formulate and communicate the main ideas and principles.

A masterplan is a useful tool for setting the context and guiding principles for future development, describing how you want to develop the site, the sequence of that development and how to achieve it.

It will address flexibility and future changes including land for expansion, while keeping a sensible and realistic sense of scale. This should help avoid finding you have spoilt your future plans by building new nets or a car park in the perfect place for a second pitch.

The masterplan is a fluid process for gathering different opinions and provides a framework for connected thinking towards a solution. It should be reviewed and updated to accommodate future ideas, always taking the long term view.

05. Building Planning and Design

Why design matters

Design is important to a project's success because it provides creative and efficient solutions to complex problems. Good buildings work well in many ways: efficient use of space, rational adjacency, quality of light, thermal comfort, atmosphere and orientation. They take account of how the surrounding space is used, views in and out and form welcoming entrances. Good design takes account of what the building looks like: its symmetry and balance, composition, proportions, beauty, using materials that compliment each other and their surroundings. Good design is also concerned with economy, longevity, energy efficiency, acoustic performance, flexibility and adaptability. The design should be inclusive and provide integrated facilities for players, officials and spectators of all ages, culture, ability and gender. Good buildings should be sustainable, balancing their use of resources and minimising waste (see section 7 Sustainability).

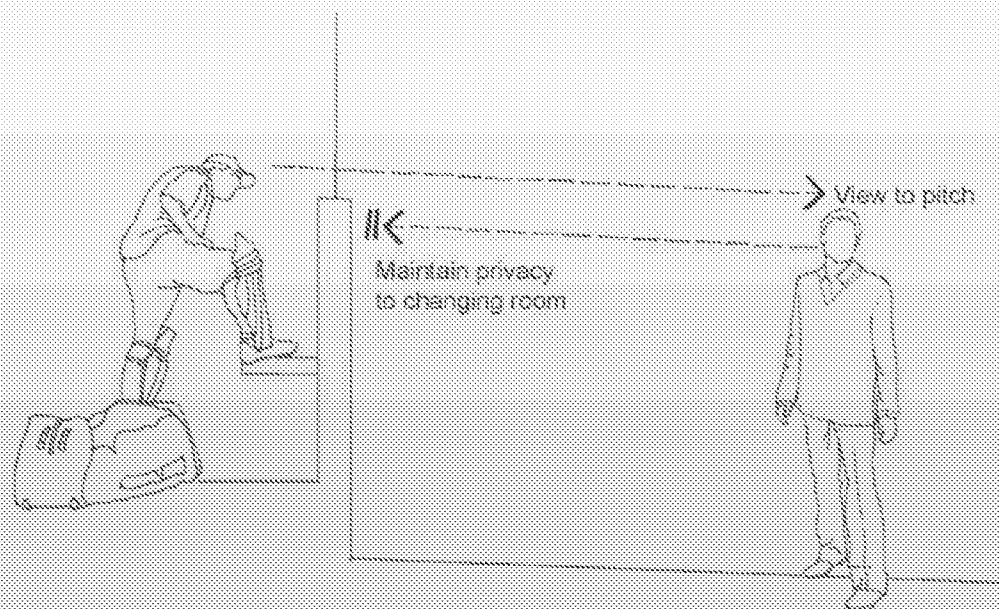
Architecture and sport

Sport is a source of delight and the architecture surrounding it should help reflect and nurture that excitement. It can promote better sporting performance through increased participation leaving a long term legacy that embraces the whole community. It is vital that sports buildings are open and accessible and well integrated with the community they serve while remaining sensitive to their context. Resources will always be limited and in many sports buildings the business plan is a delicate balancing act. This can be helped greatly by doing more with less, by getting one component of a building to play more than one role. The features that help to create a positive atmosphere in the building should not be wilful additions to the brief but a series of elements brought together so that each part serves more than one purpose. Generating an uplifting environment is a natural product of good design and doesn't need to cost any more money.

Cricket

Cricket teams use changing rooms in a slightly different way to other sports because of the pace of the game. Although the fielding side will leave the pitch together at the end of the game, the batting team often change as they come off the pitch and only pad-up shortly before they are called into bat. For that reason, it is desirable to have a visual connection between the changing rooms and the fields of play so batsmen can stay aware of progress and avoid

being timed-out while padding up. The view out from the changing rooms must be carefully balanced with maintaining privacy, which is particularly important if there are junior players. Players should also have easy access to the pitch from the changing rooms. Surveillance of the entrance is important to maintain security for valuables left in the batting team's changing room.



05.

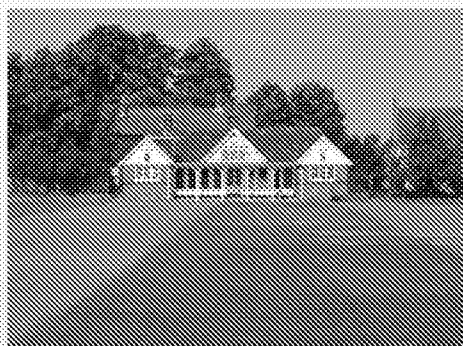
Traditional pavilions

Many traditional pavilions follow a tried and trusted building plan with a central entrance facing the pitch into a central social space with changing rooms either side, all with views of the pitch. The kitchen, showers and toilet facilities are located towards the back of the plan. This can work very well in practise and there are many beautiful examples.

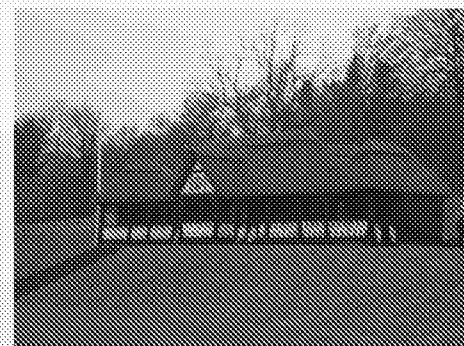
The plan or layout of these traditional pavilions is still relevant today and often work well as buildings in use. However, the traditional design, materials and elements such as clock towers, dominant roofs and weather vanes are sometimes less relevant.



Oxford University Parks Cricket Pavilion 1881
© The Curators, Oxford University Parks



Gonville and Caius College Summerfield
© Cambridge2000.com



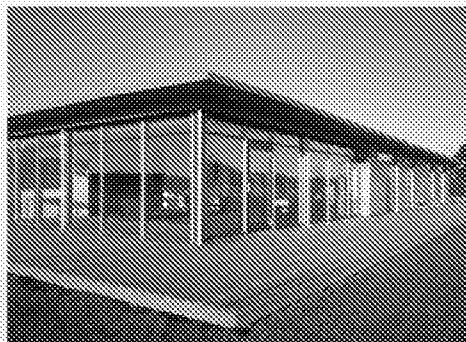
Wormsley Cricket Club

Contemporary pavilions

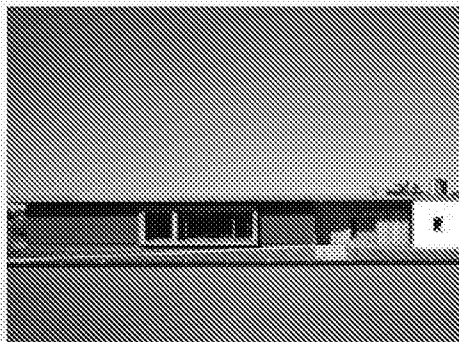
The aim of this guide is to create contemporary pavilions with modern concepts and materials while safeguarding the traditions of cricket and therefore securing a future for the game.

These examples of modern pavilions provide club accommodation in a similar plan layout to traditional

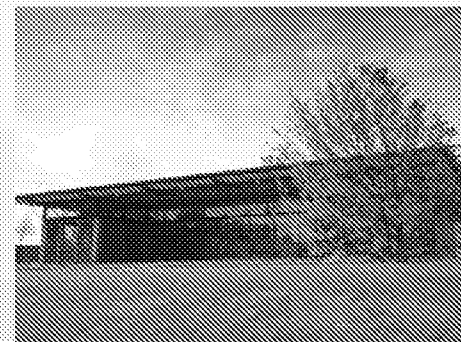
pavilions but the buildings appear fresh and up-to-date. Modern materials and efficient building forms and structures create robust, efficient and beautiful buildings. The plans provide the same accommodation as traditional pavilions but in a more modern way. The simple elevations and materials make very attractive, contemporary club facilities.



Stirling Cricket Club Pavilion by JM Architects
© Andrew Lee



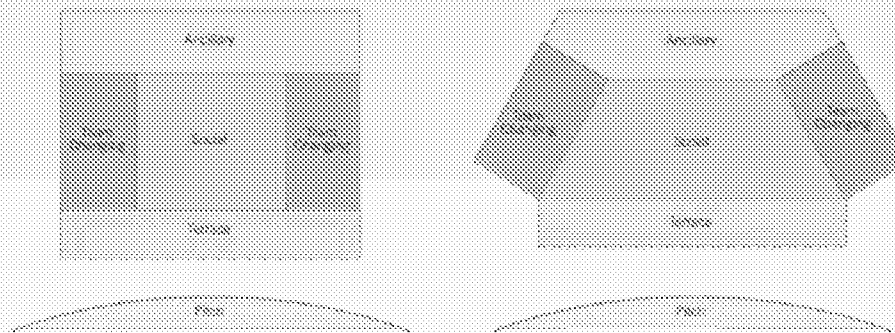
Balornock Bowling Club by Studio KAP
© Keith Hunter



Broughton Hall Pavilion by Hopkins Architects
© Simon Miles

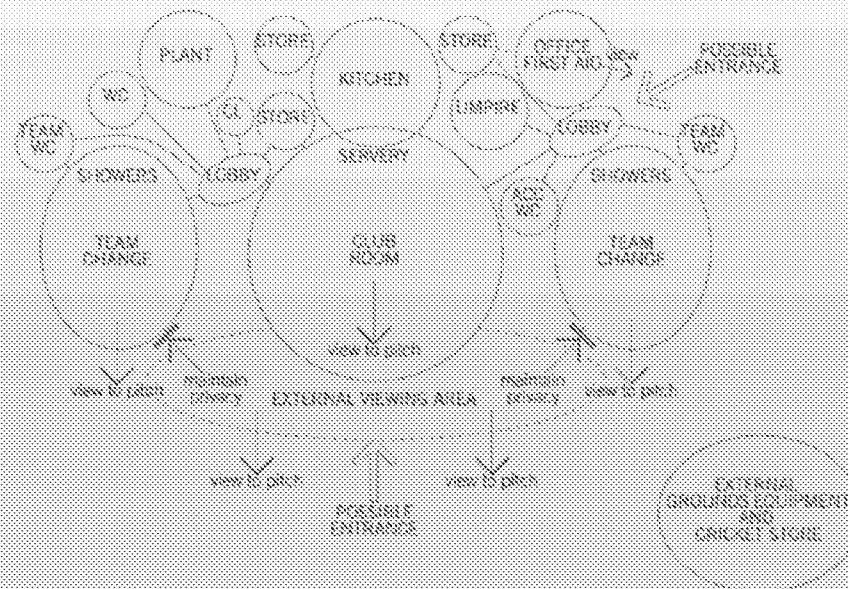
05.1 Accommodation

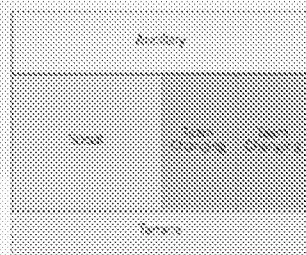
Diagrams showing spatial relationships



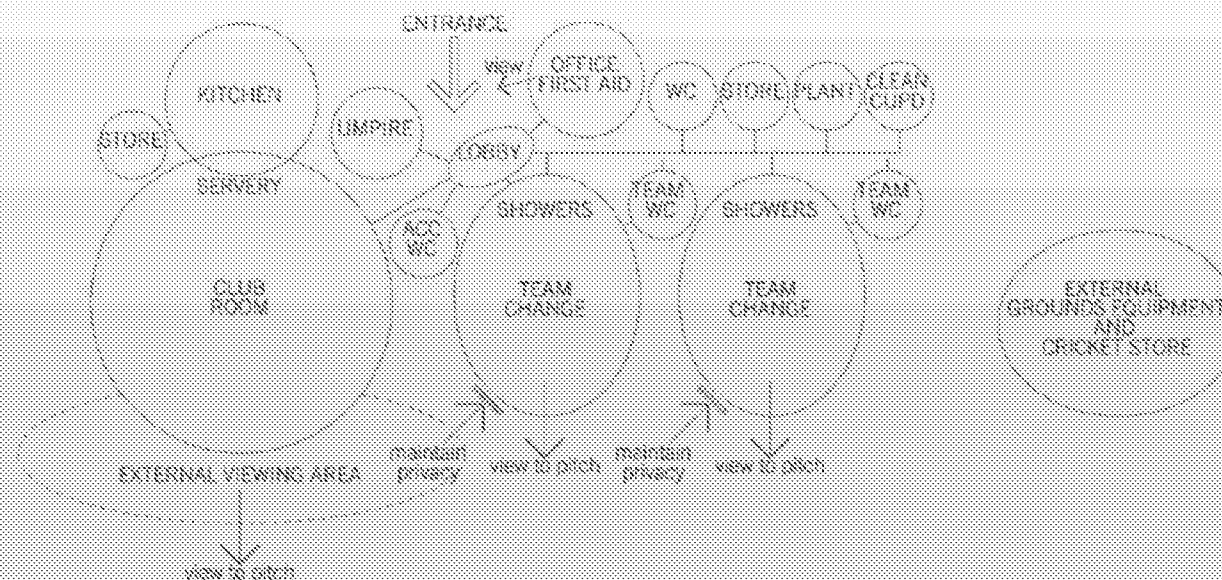
Many pavilions follow a tried and trusted building plan with two changing rooms either side of a social space overlooking the pitch. The kitchen, showers and toilet facilities are located towards the back of the plan. This can work very well in practise.

The social space and changing rooms could be angled to open up and maximise view of the pitch





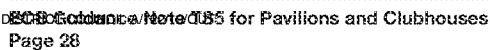
This diagram shows the changing rooms to one side of the social space, both with views towards the pitch. The ancillary spaces are located towards the rear of the plan.



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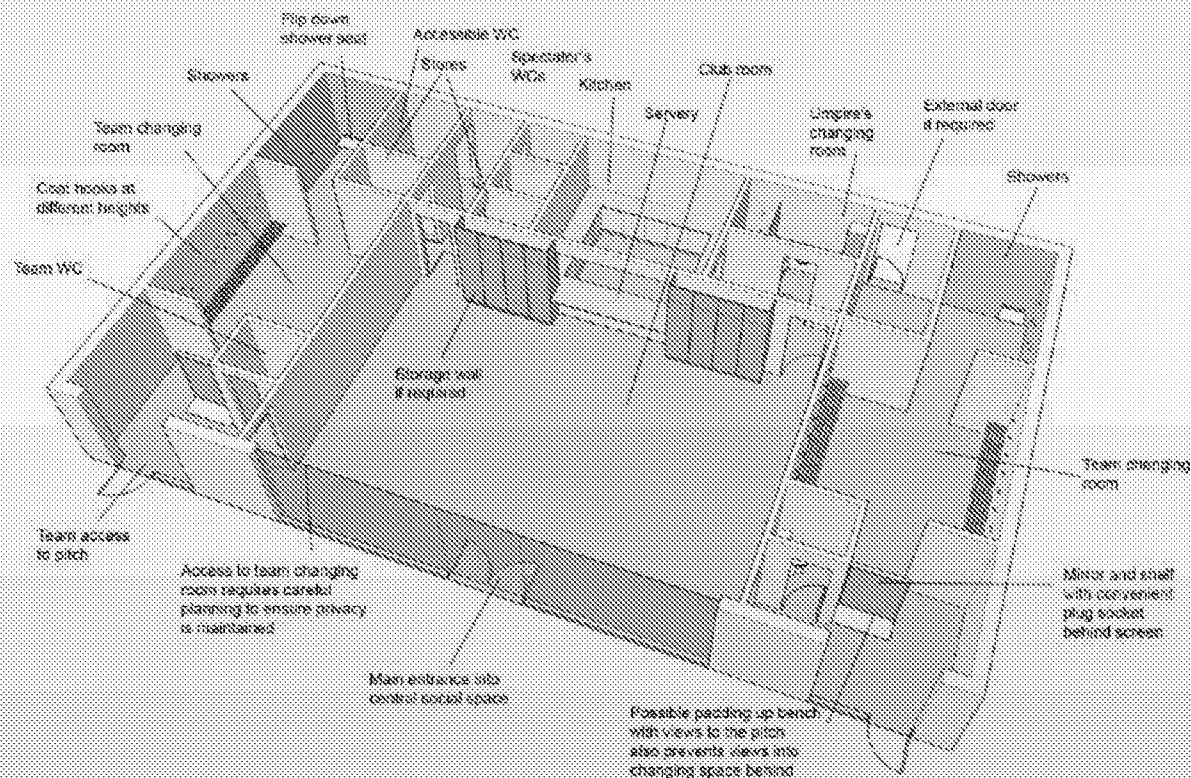
Two changing room cricket pavilion

This diagram shows a small, two changing room cricket pavilion with central social space as the block diagrams and adjacency diagrams above.

This diagram only shows the essential spaces noted in the accommodation section below and does not include desirable spaces such as a flexible changing room, bar, office and reception. Assume the grounds equipment store is provided elsewhere.

This follows a traditional pavilion plan with the main entrance directly into the social space and this is considered suitable for summer sports. Consider an entrance area for mixed sports clubs with winter use.

There are views from the changing room to the pitch from the padding-up bench which acts as a privacy screen to the main changing space behind.



Accommodation

The accommodation should meet the current and future needs of the club and can be considered in terms of what is essential or desirable:

Essential	Desirable
Entrance	Reception
Team changing room and showers	Office
Officials changing room and shower	Flexible changing room and shower
Toilets for players, officials and spectators	Additional umpire changing room and shower for multi sport facilities
Provision for first aid	Bar
Social and dining/ tea room	Meeting room
Club room	Secure storage for trophies
Kitchen and servery	External cricket equipment store
Storage	Refuse area
- food and beverages	
- consumables	
- cricket equipment	
- cleaner's equipment	
Plant room	
Grounds equipment store	
(this can be integral or external – see storage)	
Scoreboard	
Scorer's base	

Cricket club accommodation in England falls into planning use class D2 – assembly and leisure.

Clubs might encounter difficulty if the local planning authority is reluctant to grant permission for the social and administrative spaces in parks, open spaces or green belts.

There is positive support in current planning policy guidance PPG2 for green belts to provide opportunities for outdoor sport, but the construction of new buildings in green belts is considered inappropriate unless they are essential facilities – an example described in PPG2 is small changing rooms and unobtrusive spectator accommodation. The design and access statement (submitted with the planning application) should address the necessity for the social and administrative spaces and robustly demonstrate they are essential to the club, appropriately sized and sensitively designed for the context.

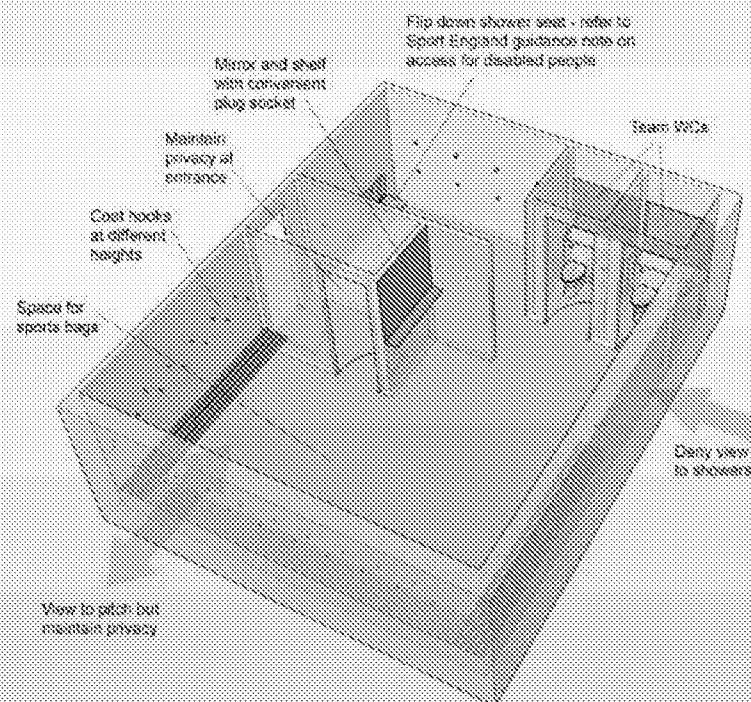
The right scale for the social and administrative spaces is influenced by site-specific factors as well as club needs. Club requirements and membership should be balanced with proposed hours of use of the social spaces and proximity to residential areas, planning restrictions, land ownership and covenants.

Early consultation with the ECB is vital as it can help towards a successful outcome.

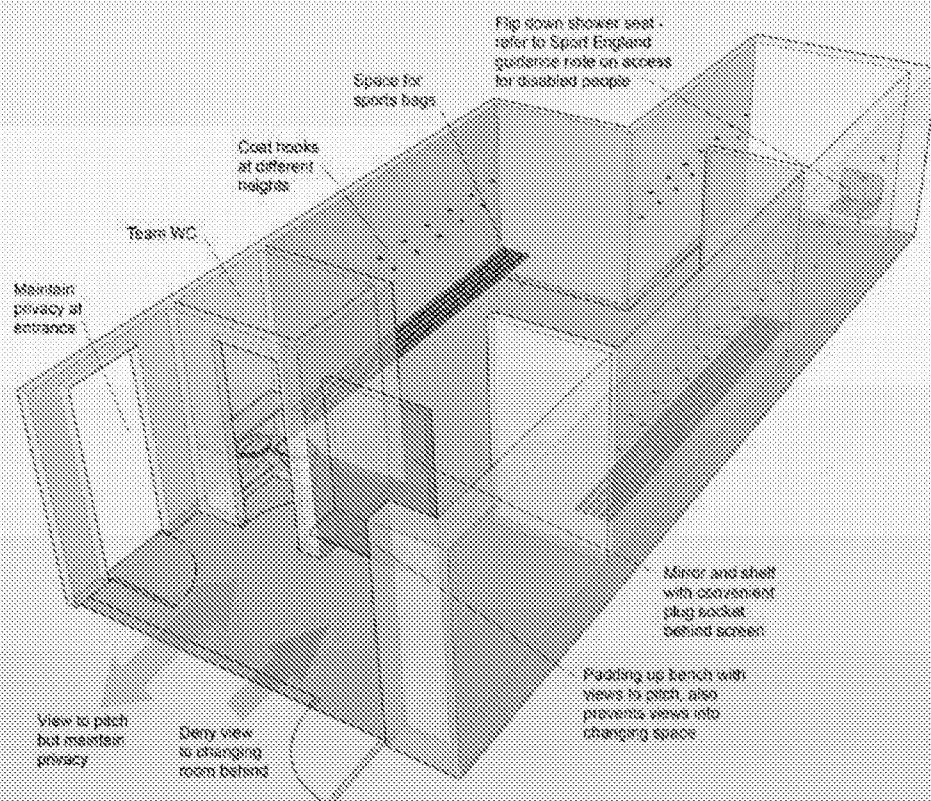
Changing for players

Team changing rooms need to accommodate the anticipated number of players, substitutes and coaching staff. The number of changing rooms provided will depend on the number of pitches in use at the same time. Communal changing rooms are a practical and cost effective way of providing facilities. Disabled players should always be accommodated within the team changing rooms. Careful arrangement of screens and doors should allow privacy for changing players while others enter or leave the room. Refer to Sport England design guidance note on access for disabled people. http://www.sportengland.org/se_facilities_disabled.pdf In some cases the solution can be changed to suit the culture or multi-culture of the club, or to adhere to child protection legislation and child safety.

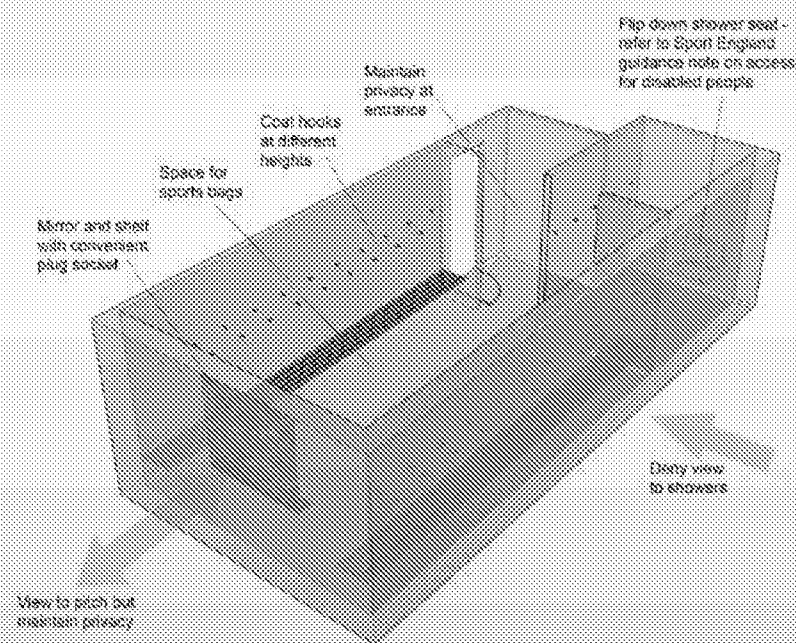
Most clubs find it sufficient to have lockable doors to the changing rooms in order to keep personal belongings and valuables safe. Lockers can be considered as an option depending on the size of the club but should be balanced against their projected use, cost and maintenance. If provided, lockers should be large enough to accommodate items likely to be stored in them – for example wallets and small items or clothes, bags and equipment.



Example of a team changing room with two team WCs



Example of a team changing room with one team WC



Example of a team changing room without integral WCs

05.1

Changing rooms	Essential for each team changing room	Desirable
Bench seating	12 spaces at 500mm wide x 450mm deep x 450mm high	600mm wide
Kit bags	12 spaces at 1200mm long x 450mm deep x 400mm high. The changing room layout should account for each player having their own kit bag or box, which can be as long as 1200mm	450mm high
Changing	Two rooms each with 20sqm for changing space, benches and bag storage with 1.8m between the front face of opposite benches	2m between the front face of opposite benches
Showers	Three shower heads per changing room at 750mm centres with 450-500mm between showers fittings and the side walls. Showers on opposite walls should be at least 2.5m apart to allow circulation. A separate dry-off area should be provided.	Four shower heads. Always check the requirements of other sports governing bodies when designing mixed sports facilities. Consider privacy screens between showers or separate cubicles.
Toilets for players	Ideally provided with convenient access from the changing room: one WC and one wash-hand basin with mirrors above. In pavilions with four or more team changing rooms, toilets for players must be integrated in the changing room and for the exclusive use of each team. This is not essential in two-changing room pavilions.	Two WCs and wash hand basins. Note that providing urinals would make the changing rooms less flexible for female use.

Entrance

The pavilion should be welcoming and accessible with a well-defined entrance that is easy to find. Pavilions that face the pitch can cause confusion if they are approached from the rear. Consider the way people will approach the building and create a sense of arrival. The entrance is the first space that visitors encounter so it's easy to create a good impression by being simple to use.

A notice-board is essential. If the pavilion is large enough to warrant it, a reception desk and small office for management staff near the entrance will provide good surveillance. Consider automatic doors if the club caters for a significant amount of wheelchair sport. The entrance area should provide good access to the social areas and changing rooms. There should be suitable security and surveillance for the batting team's changing room as this is left unlocked. Always have suitable entrance matting by the external doors. Boot cleaning facilities such as brushes or scrapers can be a good idea but are more important for facilities with winter use.

Changing for umpires

Umpires must have separate changing and shower facilities to the players. A lockable room with bench seating, coat and towel hooks suitable for two umpires with one shower, wc and wash-hand basin would be suitable for small clubs. Larger clubs should calculate the number of officials and umpires required in relation to the number of pitches and fixtures. Secure storage for valuables should be provided, possibly in the form of a lockable cupboard. A view of the pitch is desirable.

Flexible changing

The pavilion should provide flexibility for different cultures, mixed gender teams and junior players. Although suitable changing facilities can usually be accommodated by carefully programmed use of the team and umpires changing rooms, an additional small changing room and shower (similar to the umpires changing room) would give greater flexibility.

Toilet facilities

Provide suitable toilet facilities for spectators in addition to the toilets located in the players and umpires changing rooms. Careful planning and interconnecting doors could allow changing rooms to be locked while still allowing toilets to be used for evening social functions.

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The social space should flow out to an external viewing area

The social space should flow out to an external viewing area

The social space should flow out to an external viewing area

Scoreboard and scorer

Scoreboard and scorer

0123456789

Office

Corridors

Corridors should be at least 1.5m wide to accommodate passing players with large kit bags or a wheelchair turning circle. Aim for simple circulation for all users and good access to the playing areas. Players should have easy access to the pitch through areas with floor finishes suitable for spiked shoes.

Storage

Adequate storage should be carefully planned.

- Food and beverage stores: the size and location will depend on the scale of facilities.
- Adequate internal stores for consumables and cricket kit. This could be accommodated in a storage wall instead of a store room.
- Cleaner's need a lockable cupboard with adequate space for a sink, cleaning equipment and products in line with control of substances hazardous to health (COSHH) requirements
- External stores for cricket equipment and grounds equipment, machinery and supplies. These could be provided within the pavilion or as a detached hut or container concealed by a green screen, planting or fence. The relative costs of providing ground storage within the pavilion should be considered – a detached hut might be a more economical solution but it must also be secure – see security.

Plant room

The plant room should be appropriately sized and located to accommodate incoming utilities, plant equipment and boilers. Allow enough space for inspection and maintenance of the equipment. Ensure the maintenance staff are trained to operate the controls so the building and equipment runs efficiently.

Refuse area

The waste strategy should be considered at the design stage and suitable provision made for both general and recycled waste separation, storage and collection.

05.2 Furniture and Fittings

Furniture and fittings

Towel hooks are required in the shower areas along with coat hooks above changing room benches. Kit bags can be placed on the floor or a low table in the changing rooms, although care should be taken to avoid cluttering the circulation zones. Additional coat hooks and showers fixed at a lower height can be useful if junior players regularly use the facilities. Changing rooms should have a grooming or vanity area which could be as simple as a plug socket near a mirror and shelf so players can use their own hairdryer.

Suitable space for waste and recycling bins should be identified along with the requirement for vending machines, sanitary disposal bins and baby-changing facilities. Vending machines, if required, should not block corridors. Tables and chairs that can be stacked and are light enough to move around will give greater flexibility than heavy or fixed items. The choice of furniture will affect the look and feel of the clubhouse.



05.3 Security

Security

Security is an important issue for cricket clubs as inevitably there will be periods when the building is unoccupied and potentially vulnerable to attack from arson, graffiti, vandalism and theft. Preventative measures include secure locks, building alarms, CCTV, security shutters, perimeter fences and also by careful design of the building, choice of materials or in some cases having a presence on site such as caretaker's accommodation. This problem is site-specific so whereas some clubs will encounter little or no trouble, others will need to give careful consideration to their security measures. It shouldn't be easy for intruders to climb onto the roof, but if they do, a solid underlay to the roof covering will make it more difficult to break-in. If there is a bar or your club routinely holds fundraising activities, you might want to consider installing a safe or lockable drawer. The police force has architectural liaison officers who will be able to comment on proposed clubhouses under their secured-by-design initiative.

The grounds equipment store could be provided within the pavilion or a separate building. However it must provide secure storage and be alarmed on the same system as the pavilion – grounds equipment and supplies are expensive and should be adequately protected.



05.4 Materials and Finishes

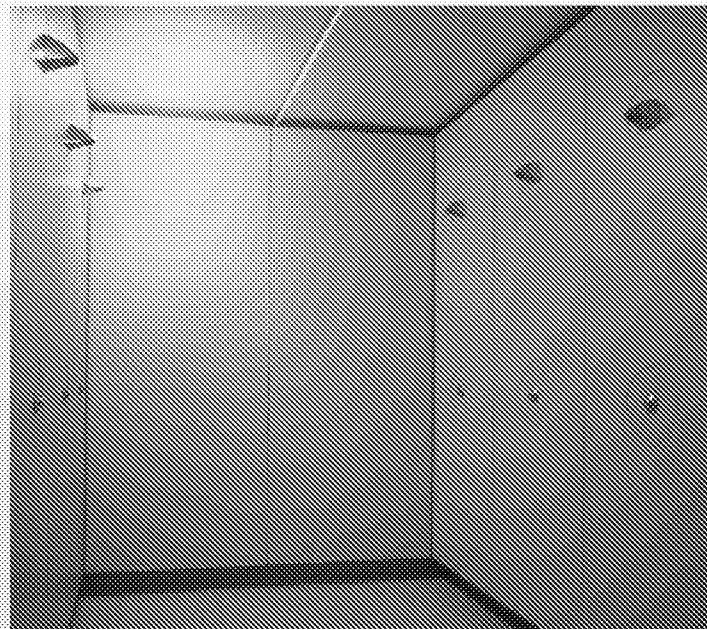
Materials and finishes

The materials and finishes should be selected for their robustness, appearance, sustainability, cost and ease of maintenance and repair as this will affect how well the building is looked-after and therefore how long it will last. The final choice will depend on the setting, design and possibly local authority planning constraints. Glazing should generally be clear and glazed in hardwood or pre-finished

aluminium frames. The building envelope in range of the cricket pitch should be able to withstand the impact of a cricket ball or elements that could break should be easy to replace. Doors should be solid-core construction for robustness and acoustic properties and should be fitted with good quality ironmongery and kick plates. Floors where players are expected to walk should be suitable for spiked-shoes.



Lightweight furniture can give greater flexibility than heavy or fixed items.



Solid panels conceal pipe work and are easy to wipe down to keep clean.

Internal finishes for cricket only facilities

Area	Floor Finish	Wall Finish	Ceiling Finish	Skirting
Changing room	Spike resistant homogenous sheet or carpet. Ceramic tiles and laminate flooring are unsuitable.	Painted brick, block-work or plaster. Homogenous hygienic sheet. Plasterboard is unsuitable but a more robust board could be acceptable.	Painted plaster. Suspended ceilings with modular tiles are not recommended for ceiling heights lower than 2.7m. If used, tiles must be humidity resistant.	Optional.
Shower and drying area	Sheet safety flooring with welded joints or non-slip floor tiles, laid to fall towards the floor drain.	Homogenous waterproof sheet or ceramic tiles.	Painted plaster. Suspended ceilings with modular tiles are not recommended for ceiling heights lower than 2.7m. If used, tiles must be humidity resistant.	Coved skirting forming a waterproof joint between floor and wall.
Toilets	Sheet safety flooring with welded joints, preferably spike resistant.	Minimum requirement is painted brick or block-work with tiled splash-back over washbasins and behind urinals. Preferred finish is if funds are available is homogenous waterproof sheet or ceramic tiles.	Painted plaster. Suspended ceilings with modular tiles are not recommended for ceiling heights lower than 2.7m. If used, tiles must be humidity resistant.	Coved skirting forming a waterproof joint between floor and wall. Concealed pipes and WC cisterns are preferred if funds are available.
Circulation	Spike resistant homogenous sheet or carpet in areas expected to be used by players. Ceramic tiles and laminate flooring are unsuitable.	Painted brick, block-work or plaster. Plasterboard is unsuitable but a more robust board could be acceptable.	Painted plaster. Suspended ceilings with modular tiles are not recommended for ceiling heights lower than 2.7m.	Optional.
Plant Room and cleaner's cupboard	Sheet safety flooring with welded joints or floor paint to screed or concrete slab.	Painted brick or block-work with splash-back behind sink.	Painted plaster.	Optional.

06. Services

The key services required are water, heating, lighting, power and drainage. The services installation can amount to one-third of the construction costs so should be carefully designed and installed. Good services design will help provide comfortable facilities with adequate ventilation and prevent mould growth in shower areas.

Zoning

Efficient zoning and distribution of wiring, pipes and drainage can help reduce installation and running costs. All mechanical and electrical work must be carried out in accordance with building regulations and current institution of electrical engineers (IIE) regulations.

Utilities

Information on the proximity and availability of new services connections is vital as gas and electricity are not always readily available on remote sites. Alternatives such as renewable energy and bio-energy (refer to section 7 sustainability), or oil and liquefied petroleum gas (LPG) need to be investigated in conjunction with their life cycle costs, sustainability and the available space for storage and maintenance. Quotations should be sought from the relevant utility companies to establish if there is capacity for the new service connections, their costs and timescale.

Water and water saving devices

The use of low or dual-flush toilets, waterless urinals, aerating taps and showers is encouraged as they use less water without reducing performance. Taps and showers should also be thermostatically controlled. Consider having additional shower heads at a lower height if children regularly use the changing rooms. Routine observation and maintenance should be carried out to reduce wastage through leaks. Movement detectors can also be considered to shut off the water supply, preventing leaks when the building is not in use for long periods of time.

Heating

Frost protection is essential as a minimum provision, but central heating is preferred – either by radiators, ceiling panels or under-floor heating. The choice might be influenced by the heat source or boiler. Mechanical ventilation extract is required to the showers, toilets and kitchens under the building regulations.

Lighting

Low energy lighting can reduce running costs as can proximity sensors (PIR) that will turn lights on automatically upon sensing movement and switch them off after a period of inactivity. Bear in mind external lighting will assist safe access from the pavilion to the boundary or across the car parks at night but the light fittings should be selected to reduce light pollution which can be a source of annoyance to neighbours.

Services for temporary accommodation

Consider identifying a location for a marquee or temporary accommodation to be erected on the site and consider installing appropriate external power and drainage connection points that could occasionally be used for large events.

Drainage and rainwater harvesting

The drainage design and proximity of suitable foul and surface water drains should be addressed early in the design stages. Rainwater can be discharged into the local surface-water drainage system but some clubs face large annual charges to do so. If the ground can't cope with the rainwater run-off, an alternative solution would be to have a soak-away or to collect the rainwater and use it for flushing toilets and watering the pitches and landscaping.

If there aren't sufficient falls across the site to sustain a gravity drainage system then a pump and chamber will be required together with a high pressure pumped drain to a discharge point. In the absence of a suitable discharge point a septic tank or sewage treatment plant will be required and must be sized to suit the proposed building occupancy.

07. Environmental Sustainability

The current focus on the environmental impact of buildings is not a new trend and has always been an inherent feature of good design. An approach that takes every opportunity to do more with less and to reduce construction and running costs has sustainability as a natural bi-product.

Sustainable development has been defined as meeting the needs of present generations without compromising the ability for future generations to meet their own needs. In practise, this means minimising the environmental impact of buildings by efficiency in the use of space, energy and materials, but it also applies to the wider environment such as the construction process, demolition, waste, water use, pollution, employment, transport, building use, flexibility and adaptability.

Climate change

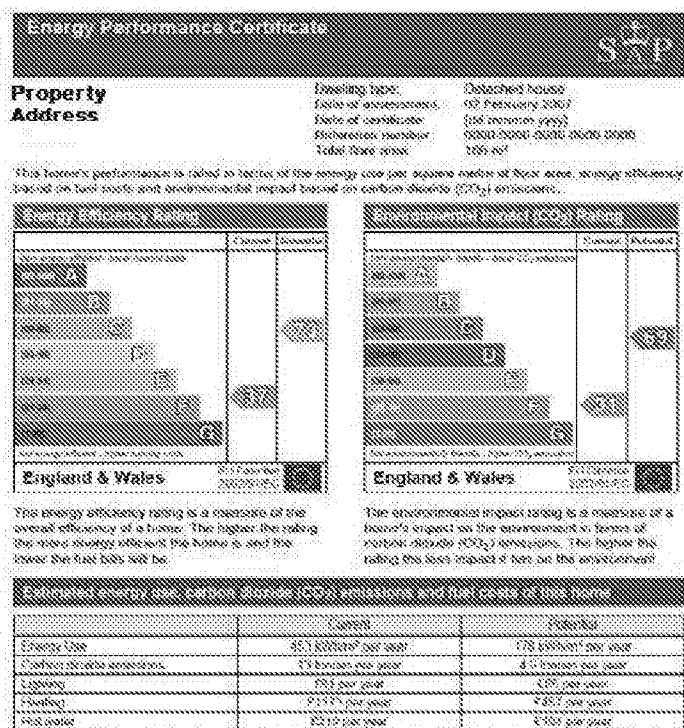
The climate is thought to have changed many times over millions of years but when people talk about climate change nowadays they are generally referring to the changes in temperature that have happened in the last hundred years. During this time the average temperature of the atmosphere near the earth's surface has risen by 0.74 degrees Celsius, the average sea level around the UK is about ten centimetres higher than it was in 1900 and ten of the hottest recorded summers have occurred since the early 1990s. In contrast, recent UK summers have enjoyed much less sunshine than average whereas rainfall and flooding have been more extreme.

What has the government done

The UK signed both the United Nations framework convention on climate change in 1992 and the Kyoto protocol in 1997 that set targets for reducing greenhouse gas emissions. The 2006 Stern report on the economic impact of climate change found that the costs of inaction far outweighed the costs of action. In 2007, the government published the draft climate change bill which aims to set legally binding targets for reducing carbon dioxide emissions from a 1990 baseline by 20 per cent by 2010, 30 per cent by 2020 and 60 per cent by 2050. It has also set a timetable for carbon neutral development by proposed revisions to the Building Regulations in stages with a 25 per cent improvement in 2010, 44 per cent improvement in 2013, zero carbon for homes in 2016 and zero carbon for potentially all non-domestic buildings in 2019.

Energy performance certificates

Energy performance certificates (EPC) have been introduced to help improve awareness of the energy efficiency of buildings. From October 2008 all cricket pavilions will require one on construction, sale or rental.



Building Regulations Part L

- conservation of fuel and power

There are five key criteria for the conservation of fuel and power under the building regulations:

1. Achieving acceptable building carbon dioxide emissions
2. Limits on design flexibility such as U-values, air-permeability, heating controls, lighting efficiency and pipe-work insulation.
3. Limiting the effect of solar gain for example by shading and orientation
4. Quality of construction and commissioning, for example, continuity of insulation and correct settings of boilers to ensure efficiency
5. Providing information in the form of a building manual to help users understand the systems and carry out maintenance and monitoring of energy consumption.

The Merton Rule

Some local authorities have a planning policy that requires a percentage of a proposed building's energy use to be provided by on-site renewable energy in order to reduce annual carbon dioxide emissions. This is known as the Merton rule because it was first implemented by the London Borough of Merton. Many other planning authorities have adopted similar policies or are considering their implementation. Refer to the Merton rule website for more information, www.themertonrule.org/

It follows that a more energy efficient building will require less renewable technology (solar thermal panels/ ground source heat pumps) to meet the prescribed percentage of on-site renewable energy required.

How does this affect cricket pavilions and clubhouses

The government estimates that buildings are responsible for almost half of the UK's energy consumption and carbon emissions. The type of construction, building use, heating, cooling, ventilation, hot water systems and lighting are key factors affecting the energy performance of a building. The main way to help tackle climate change through building design is to reduce the amount energy consumed by using building materials and forms of construction that are efficient, sustainable and reduce waste.

It can be useful to describe the methods for doing this in terms of light green and dark green. At one end of the scale are passive light green measures (low-cost/ high-value) that needn't cost any more money and should be done, such as building form and orientation. At the other end of the scale, dark green measures have associated costs and need careful consideration of their financial viability, such as photo-voltaics.

Passive (or light green)

The first step is to use passive or light green measures to reduce the energy required to run the building, for example a highly insulated envelope, thermal stability, sunlight and daylight control and natural ventilation. Look at what is available from the site and the brief by exploiting placement, form and orientation to harness the free resources of sun and air, and to eliminate waste and unnecessary reshaping of the site. Pavilions and clubhouses are relatively small buildings so they can be naturally lit and ventilated by windows, louvers, roof-lights or sun-pipes. A well ventilated space will smell fresh while roof lights and high level windows let in daylight and can improve the stack-effect of natural ventilation. North facing windows will let in daylight but prevent too much solar gain. When buildings are lit during the day without using artificial lights, it can save energy, prevent heat gain from light fittings and make a more enjoyable space.

Passive methods tend to work well under most conditions but can struggle to cope with extreme cold snaps in winter and the peaks of summer. Thermal mass can be exploited by exposing concrete soffits or masonry walls – this will slow down the rate at which the building heats up and cools down, creating a more stable temperature and reducing the temperature peaks and lows.

Improving the performance of the building fabric will reduce the amount of energy required for heating or cooling. High levels of insulation will minimise heat loss and efficient appliances will also lower energy use and costs. The insulating performance of windows will also help prevent excessive heat loss. Grouping services into efficient zones and using presence sensors can allow lights to be turned on and off when not required. Naturally ventilated buildings also avoid the high maintenance costs associated with air conditioning.

Other important steps are to use less water. Low or dual-flush toilets, waterless urinals, taps and shower aerators all use less water without reducing performance. If less water is used, then it follows that less water heating is needed which reduces running costs.

Materials

The choice of building materials can affect the performance and environmental impact of the building. There is a huge variety of building materials available, new and recycled, traditional and innovative all with different properties, sustainability, performance and costs associated with the energy consumed in their production, delivery to site, installation and demolition.

For example, timber products act as a carbon sink throughout their life, have low energy consumption and low carbon dioxide emissions which make it a very attractive building material. The programme for the endorsement of forest certification (PEFC) and forest stewardship council (FSC) both have schemes that certify timber comes from a sustainable source by monitoring its chain of custody. Timber frame technology can allow walls and floors to be manufactured off-site which can reduce site waste. It can also be a rapid and efficient form of construction. However, careful design and specification is required to ensure robust details that prevent deterioration, especially in changing rooms.

Thermal insulation is also very important. Some forms of insulation (such as mineral wool) require a lot of energy in their manufacture but this is compensated by the energy saved when installed and it also performs well in fire. Other forms of insulation are considered better-than-zero-carbon, for example hempcrete is made from hemp grown in the UK and mixed with a lime based binder to form a composite building material.



Green walls and roofs

Green walls and roofs might not be appropriate for all building types but could be suitable in some areas, possibly where there are sensitive planning issues. There are many benefits to using them on existing buildings or new developments:

- Reduced surge from storm water run-off and there is potential for harvesting rainwater
- Cooling: hard dry surfaces get hot in the sun whereas plants cool themselves very effectively.
- Reduced thermal load on the building fabric
- Air filtration from the plants by removing volatile organic compounds from the air
- Noise attenuation from the soft plant surface
- Encourages biodiversity and creates ecological microclimates
- Green walls provide an uplifting environment for building users and passers-by

The building must be designed to take the load of the plants and soil or growing material plus the water they hold. The watering and maintenance requirements must be carefully considered to ensure the green wall or roof thrives and prevent dying plants becoming an eyesore.

Renewable energy (or dark green)

Once passive energy design measures have been incorporated to minimise the energy requirements, the need for generating renewable energy (micro-generation) on the site can be assessed. Buildings inevitably will require some energy in use and on-site renewable energy is the next step towards zero-carbon. A number of systems are available although the initial costs sometimes outweigh the savings in use so they should be considered carefully.

Solar thermal hot water

Solar thermal systems use energy from the sun to pre-heat water for hot water or space heating by using solar tubes or flat plates to collect sunlight. These can typically provide 60 per cent of the hot water heating requirement for homes over the year, performing better in summer than winter. This is one of the more appropriate systems for cricket clubs. Consider protection of the panels from damage by cricket balls or vandalism.

Inter-seasonal heat transfer

Inter-seasonal Heat Transfer (IHT) is a patented system that captures surplus summer heat from the ground and stores to be used in winter. It is efficient because it captures and stores then releases heat as heat, avoiding losses through converting energy from one form to another. It is buried underground so doesn't have any visual impact and is not vulnerable to vandalism. It can also be reversed in summer to provide some cooling. This is one of the more appropriate systems for cricket clubs.

Ground source heat pumps

Similarly, ground source heat pumps take advantage of the relatively constant below-ground temperature to provide heating. A pipe full of water and anti-freeze is used to capture ground heat which is transferred to an under-floor heating system or radiators. This is one of the more appropriate systems for cricket clubs.

Wind turbines

Wind turbines use the wind to rotate blades that turn a rotor to generate electricity. Small-scale wind power can be suitable for remote locations but requires an annual average wind speed of at least six metres per second to be viable. The ideal site is a hill with a flat, clear exposure, free from strong turbulence and obstructions such as large trees or buildings, so it could be suitable for some cricket grounds. The visual impact and noise must also be considered.

Bio-energy

Bio-energy is when organic matter is burnt to generate heat. The carbon dioxide released when the fuel is burnt is balanced by the carbon dioxide absorbed during the fuel's production so is considered to be carbon neutral. As an efficient alternative to an open fire-place, small-scale biomass boilers typically burn wood pellets to provide heating and hot water, although they can also burn other fuels. It's important to have storage space for the fuel and a local supplier. This could be ideal for remote clubs that don't have gas supply.

Combined heat and power (chp)

CHP or co-generation is when heat and electricity are produced at the same time from a single fuel. It saves energy by harnessing the heat produced when electricity is generated and is an efficient way of using fossil fuels as it avoids the transmission losses when electricity is provided from a remote power station. Micro-CHP is a miniature CHP unit designed to heat and power a building in place of a conventional boiler. The predicted heat and power requirements need to be checked carefully as CHP isn't suitable for all projects and the best sites are usually those where there is a year-round heat demand.

Solar photo-voltaics

Solar photo-voltaic (PV) systems use energy from the sun to generate electricity. PV requires daylight rather than direct sunlight and the power can be used straight away or linked back into the power grid. They can be expensive to install compared to the electricity they generate so the financial viability should be carefully reviewed. However, if the cost of electricity increases in the future and PV technology becomes more affordable it could be worth designing the building to allow for future installation. PVs are available in a wide variety of forms, shapes and colours.

08. Regulations and Guidelines

Building regulations
Town and country planning act 1990
Construction (Design and Management) regulations 2007 (CDM)
Disability Discrimination Act (DDA)
Child protection
Sport England
Relevant sports governing bodies
Secured by design
BS 8300 2001 Design of buildings and their approaches to meet the needs of disabled people.
DCLG Fire safety risk assessment: Small and medium places of assembly 2006
BRE Digest 209: Site Layout Planning for Daylight and Sunlight' 1995
BS EN 12193:2007 Light and lighting: sports lighting publication 31 January 2008
CIBSE SLL Lighting Guide 4: LG04 Sports 2006
Licensing Act 2003

08.1 References and Bibliography

ECB publications

- TS[3] Facility briefs and guidance notes for indoor sports halls with cricket provision
- TS[5] Pavilions and clubhouses

Sport England publications

- Pavilions and clubhouses
- Access for disabled people
- Floor for indoor sports
- Changing rooms and lockers 2005
- FAQs Autumn 2007
- Car parking and landscape
- Environmental sustainability

Sport Scotland publications

- Sports pavilions and team changing accommodation

Football Foundation

- Facilities data sheet 1: Planning your facilities project
- Facilities data sheet 4: Changing rooms and clubhouses

Football stadia improvement fund (FSIF)

- FSIF data sheet 1: Planning an improvement project

Rugby Football Foundation

- Community rugby facilities guidance note 5: Changing rooms and clubhouses

CABE publications

- Sure start every building matters
- Creating excellent buildings

HM Government

- Website www.direct.gov.uk/en/

Environmentandgreenerliving/index.htm

- Energy performance certificates (EPC) and non dwellings: A guide for building owners, landlords and tenants
- Improving the energy efficiency of our homes and buildings: Act on CO2

Communities and Local Government

- Outdoor advertisements and signs – a guide for advertisers
- Sustainable designs
- Improving the energy efficiency of our buildings: A guide to EPC for the construction, sale and let of non-dwellings

Health and Safety Executive

- Website www.hse.gov.uk
- A short guide to managing asbestos in premises UK Green Building Council
- Website www.ukgbc.org
- Zero carbon task group report

RIBA Publications

- Website www.architecture.com
- Commissioning Architecture leaflet
- Clients guide to engaging an architect
- Job Book
- Which Contract by Hugh Clamp, Stanley Cox and Sarah Lupton

09. APPENDIX A - Feasibility Study

In addition to the useful information to assemble listed in Section 2 preparation, items to include in the feasibility study are:

Site analysis

Existing plan and analysis

Photographs

Outline schedule of accommodation

Sketch options:

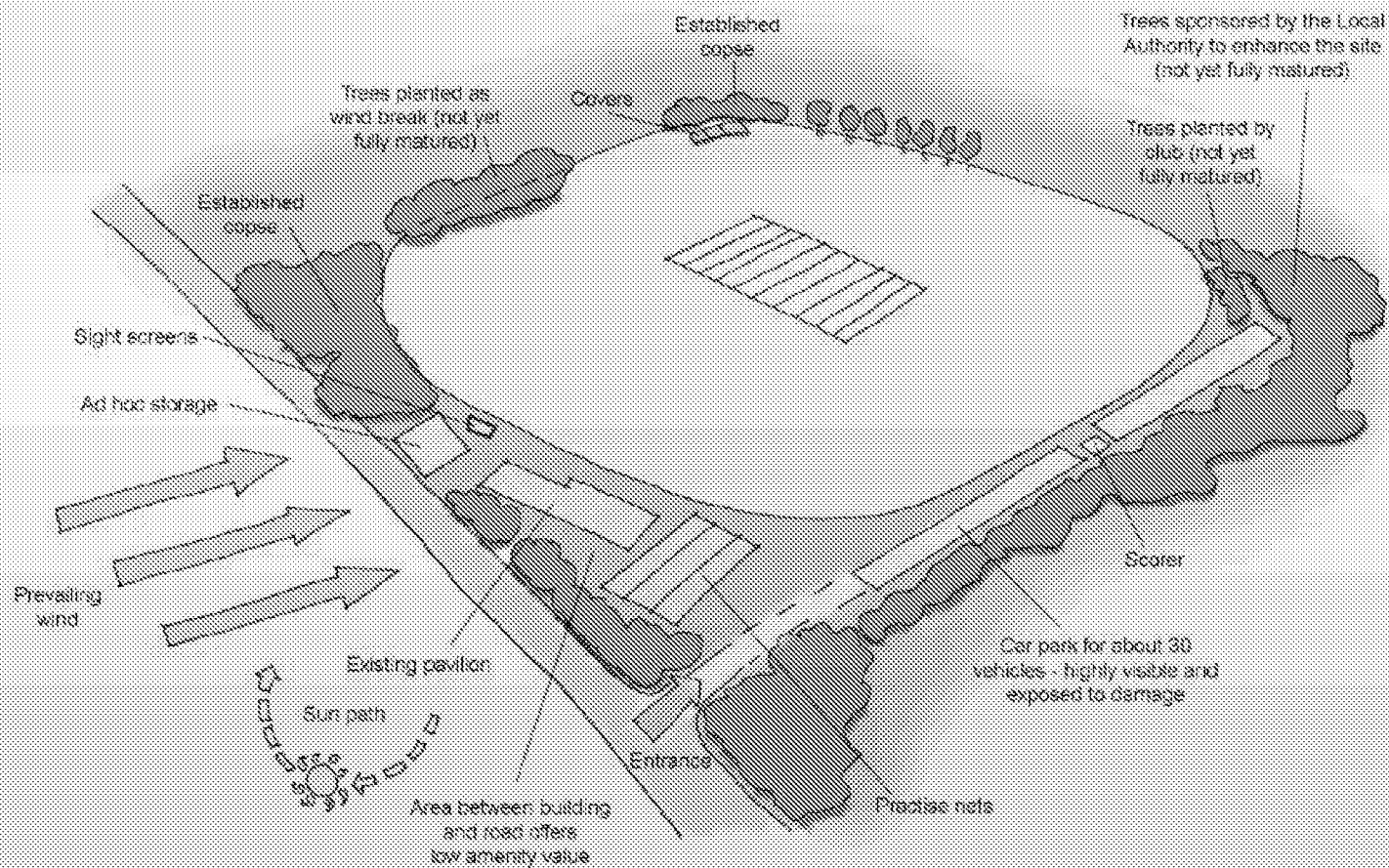
- Refurbishment and extension or new build
- Where the new building should go
- Buying or leasing new land

Outline costs and funding

Appraisal of options

Outline programme and key dates

Appraisal of sustainability and renewable energy options



10. APPENDIX B - Consultants Glossary

Architect

Architects design new buildings and the spaces around them and alterations to existing buildings. They also advise on the restoration and conservation of old buildings, layouts for groups of buildings and most of what is referred to as the built environment. They liaise with current users, clients, and construction specialists and their designs take account of information about cost, safety and social factors from other specialists in the team. They advise clients on the practicality of building projects and seek permission and approval to see if the proposals can be put into practice. Once building starts they can co-ordinate and administer the building contract through to completion. Refer to RIBA Commissioning Architecture leaflet and website www.architecture.com/UseAnArchitect/

Structural Engineer

Structural engineers design and calculate the building structure and foundations. They sometimes also design below ground drainage. Refer to www.istructe.org/

Mechanical and Electrical Services Engineer

M+E services engineers design and coordinate the services of buildings including gas, electricity, heating, lighting, ventilation, water and renewable energy. They sometimes also design the drainage. They calculate the proposed energy use of the buildings. Refer to www.cibse.org/

Quantity surveyor

Quantity surveyors measure, estimate and advise on the cost of the designs produced by architects, structural engineers and services engineers. www.RICS.org/

CDM Coordinator

CDM coordinators advise clients on health and safety issues, risks and the competency of the design team. They must be appointed by work stage C/ concept design.

Other specialists

Some projects might also require further specialist input during the design stage which will become apparent during the preparation stage:

- Access consultants advise on designing inclusive buildings for people of all abilities
- Environmental consultants and ecologists advise on environmental issues which might be required if the site is a natural habitat for protected species
- Heritage and conservation specialists advise on preserving historic buildings and restoration
- Highways engineers design and advise on new roads or alterations to the public highways
- Landscape architects design the spaces and landscape around the buildings including details for hard and soft areas, trees and pitches.
- Planning consultants provide specialist advice when preparing planning submissions or appeals in areas with sensitive planning issues
- Project managers take responsibility for planning and facilitating a project. They can act on the client's behalf providing advice and be given responsibility for making key decisions.

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ecb.co.uk

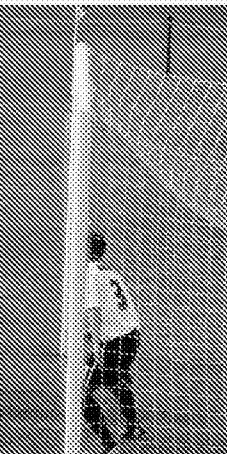
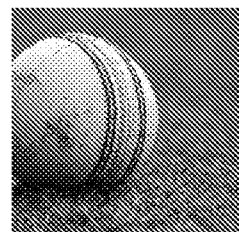


SUCCESSFUL MANAGEMENT OF DUAL USE CRICKET AND FOOTBALL SITES



Contents

1. Introduction	3
2. Structures	4 - 5
3. Financial Planning	6 - 8
4. Factors Affecting the Capacity of a Site	9 - 12
4.1 Usage	9
4.2 Pitch layout and orientation	10 - 11
4.3 Environmental factors	12
5. Maintenance	13 - 15
5.1 Regular maintenance	13
5.2 Renovations and managing season handover period	14
5.3 Example Management Schedule	15
6. Improvements/Large Scale Works	16
7. Support, Guidance Documents and Useful Contacts	17 - 20
Appendix 1	21
Appendix 2	22



1. Introduction

There are many grounds around the country where football and cricket is played on the same site. This partnership has often worked well due to the seasonal nature of both sports and the need for facilities to be generating income all year round.

There are many benefits to a successfully managed joint site which, working together, can provide a sustainable future for those parties involved. Some of the main benefits include:

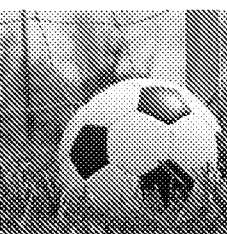
- Shared cost of operation.
- Improved quality of pitches.
- Better experience for all the players.
- Increased capacity of matches.
- More time to focus on aspects of the club.

Unfortunately a poorly managed site can cause conflicts to arise. Disputes can be caused for a variety of reasons with the most common issue being a lack of informed decision making, often manifesting itself in a lack of communication between relevant parties. This can occur on any site, however large or small, and regardless of whoever is ultimately responsible for the management of the site.

The aim of this document is to provide a practical guide to organisations that manage playing field sites with football and cricket pitches, to ensure the long term future viability of the site. This guide will provide facility operators with a greater understanding on the following:

- Identifying a clear decision making process.
- Improved financial planning for the site.
- Understanding of the technical knowledge and experience required to maintain sports pitches.
- Improved maintenance and repair regime on the pitches.
- Improved pitch layout and effective use of the site.

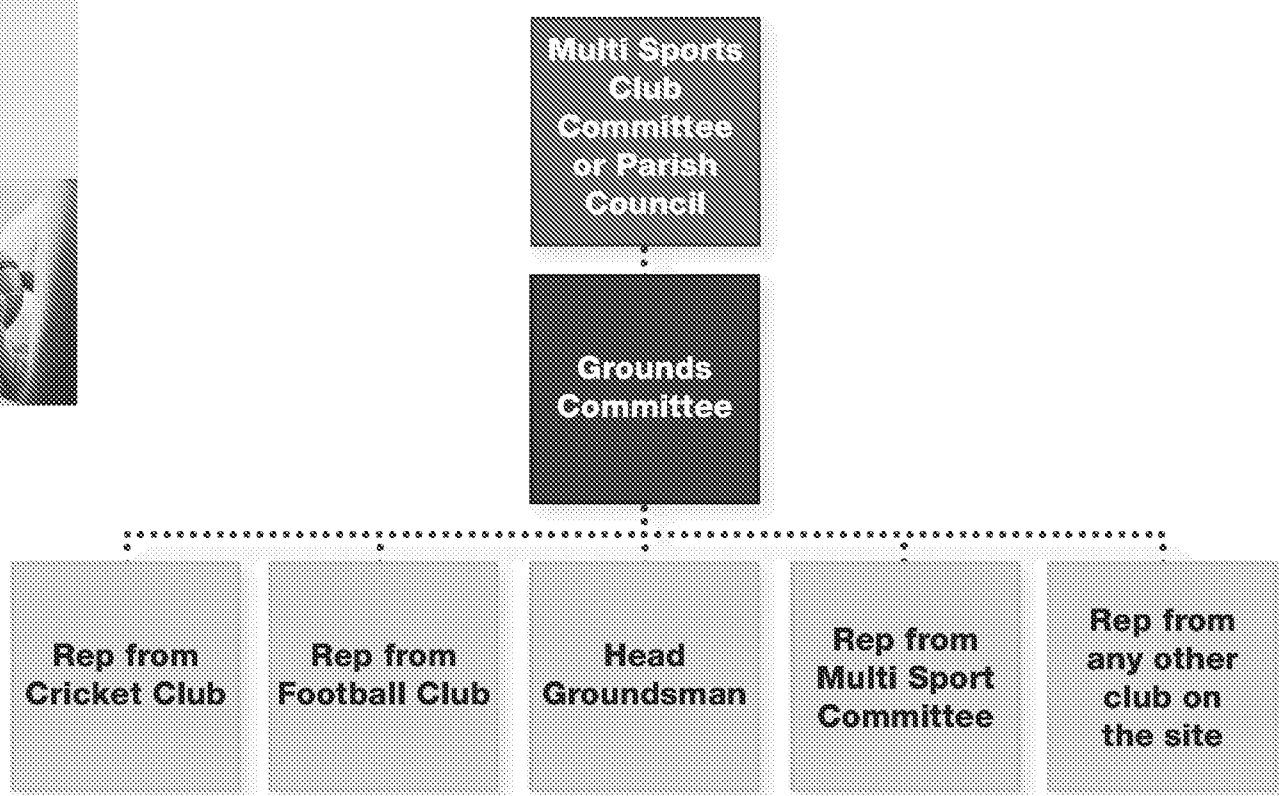
This document is targeted at all facility operators, from the small local club to local authorities managing large multi pitch sites. Its purpose is to identify the key issues and show through a series of useful tips and case studies how both sports can enjoy a long future of working together.



2. Structures

The management of a site is critical to its on-going success and viability. The key to good management is making good decisions based on accurate and relevant information. The structure of an organisation can greatly assist in this process by pulling together the people with the right skills to assist in key management decisions.

This structure will be different depending on the type and size of your organisation. Within a club environment it is often best to form a grounds management committee who make strategic and operational decisions about the management of the ground.



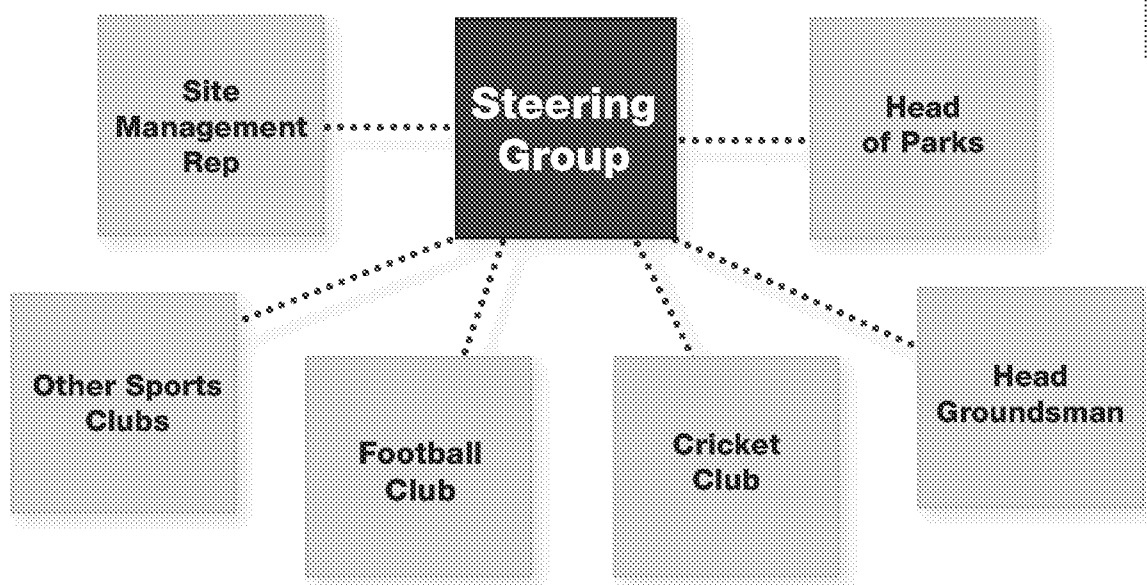
This example brings together the key partners with the Head Groundsman being heavily involved in these discussions. The grounds committee can then report to the overarching club committee.

In some cases it is not always practical to form a Grounds Committee so this could be replaced by a steering group who meet regularly. This group should be made up of representatives of the key users while also incorporating the maintenance and management team for the site. This type of structure works well in a local authority environment where a council can't devolve power.

2. Structures continued

Ensuring that the right people with the right skill sets are part of the decision making process will greatly assist in the long term management of the site.

This structure would allow the groundsmen a voice at management level so decisions regarding the site are taken with all factors considered, not simply based on income generation. This is critical if a site is to be maintained and managed to a high standard, without it the pitches can deteriorate very quickly.

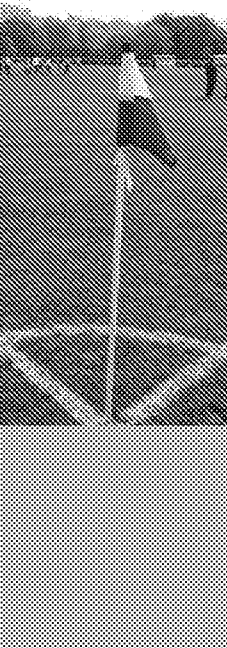


The Ground Management Committee would be responsible for ensuring all relevant legislation has been adhered to in relation to the pitches. For more information on relevant legislation please see Appendix 2.

If the management team need technical expertise on grounds maintenance, this is available through the network of County Groundsman Associations and ECB Pitch Advisers (see pages 17 - 20).

When considering the management of a multi-sport playing field it is important to understand the staff required and roles that need to be performed to ensure a sustainable facility is possible.

- It is essential to have an appropriate number of ground staff to manage your facility. This is important whether they are employed directly or a contractor is used.
- Ensure all ground staff have appropriate industry qualifications and training to keep them up to date with new methods and techniques. For more information, contact the Institute of Groundsmanship (IOG) [page 19].
 - Head Groundsman - minimum IOG level 3
 - Assistant Groundsman - minimum IOG level 2
- The grounds maintenance team should have expertise and a proven track record in managing turf under high usage loads.



3. Financial Planning

To ensure a facility can be used to its full capacity all year round, it is important to produce a business plan and yearly budget.

Good financial planning allows a club to understand its future opportunities and risks so the club can continue to be sustainable in the long term. Even in small clubs where finances are very tight it is important that they go through this process to ensure the pitches are maintained and income is maximised.

To produce a financial plan there are a number of steps that should be taken, as follows:

1. Identify what your objectives or ambitions are for the site. This is where you articulate where you want to be in the future, even if it is keeping the status quo. This will need to be linked into the objectives and ambitions of the club/organisation as a whole.

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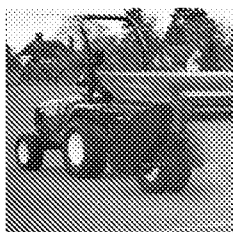
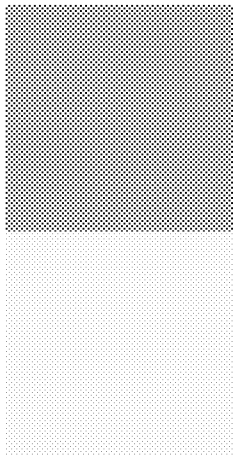
2. Undertake an audit of your facilities, equipment and cash to understand your current position. This would include an assessment of the condition of your pitches and machinery.

...

3. Once an audit has been undertaken, it is important to use the information generated to identify your club's strengths and weaknesses. This will help you identify any opportunities and threats to the club, and whether any changes are required e.g. replacement machinery, increased number of pitches to be marked out to meet demand, additional funds needed to pay for more materials etc.

...

4. This analysis of the audit and the identified objectives will allow you to plan for the future. This may mean planning for more staff to help maintain the facility, the securing of more land to accommodate increased activity, or simply planning to keep the site running as it is now.

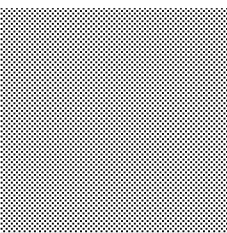
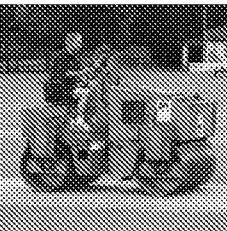


3. Financial Planning continued

5. Once the strategic direction has been mapped out the next step is to produce yearly budgets to deliver that plan. There should be budgets for each part of the business which will include one for the ground. When considering the budget for the ground some key factors to consider are:

- Yearly machinery servicing.
- Sinking funds for replacement machinery and equipment.
- Training requirements.
- Enhanced storage requirements to meet legislation.
- Changes in the costs of raw materials such as diesel and loam.
- Ensure the right level of maintenance is budgeted for. Too little and irreversible damage to the playing area could occur, too much and you are wasting time and money.
- Increased number of matches will increase labour and material costs.
- Ensure that the carrying capacity of the pitches is not exceeded (see Section 4.1). Too many matches could cause irreversible damage which take a large capital investment to rectify

6. Once a budget has been produced, it is important for it to be monitored throughout the year so any unforeseen circumstances can be identified. If these should arise, the management committee can act accordingly to address them. A good example of this could be the sudden breakdown of a mower which can't be repaired so a new one is required which wasn't budgeted for.



3. Financial Planning continued

A budget is essential to allow decisions to be made on how best to use funds, for example, neglecting the maintenance of machinery could become a false economy as machines' life spans are reduced.

An example expenditure budget for a ground can be found in Appendix 1. Please note that this is part of a full club budget and is not a stand alone document.

Within Local Authorities it's not always as simple as setting a stand alone income and expenditure budget, as often budgets are set more centrally with little input from the team on the ground. There may be no link between the income generated and the expenditure of maintaining the site.

In these circumstances, local authorities are strongly urged to consider each playing field as individual business plans so the income generated to the site is linked to the expenditure. By doing this it allows those responsible for the site to plan appropriately and can then follow the process described above.

Centrally incurred costs should be apportioned appropriately over the multiple sites. This is important for both budgeting and financial reporting to fully reflect actual expenditure. For example, one person may be responsible for three grounds so for budgeting purposes it is important that their time cost is split proportionally across each site budget.

When planning your budget you should be aware that with turf sport pitches there comes a point when too many matches causes significant damage. This could require extensive repair or reconstruction work and manifest itself as an unexpected expenditure in your budget. It is therefore important to know the carrying capacity of your site and what level of activity is sustainable within your budget.



4. Factors Affecting the Capacity of a Site

4.1 Usage

Understanding who will use your pitches and how often is critical to producing an appropriate management plan for the year.

When understanding how much usage of the pitches takes place you will need to consider the following variables:

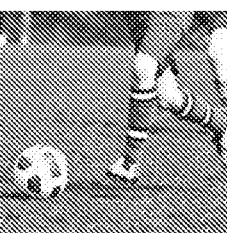
- The type of activity that is proposed by each sport, such as competition, education and training.
- The level of play that is proposed such as junior, senior, league requirements etc.
- Identify how much use there will be for each 'Type of activity' and 'Level of play category' for each sport.
- NB Industry standards state that a cricket pitch can be used for 5 adult day matches or 7 junior matches. Football pitches can be used depending on the level of maintenance and quality of drainage of the pitches.

It is important to map out each seasons usage and to identify any potential overlap of use within the year. This should be done on a twice annual basis, once during the summer in preparation for the football season, and once in the winter in preparation for the cricket season. This will highlight where issues such as overuse, maintenance requirements and usage conflicts may occur and appropriate compromises can be found. However, it is important that usage plans are reviewed regularly throughout the season as matches do need to be rescheduled for various reasons and this can put added strain on the crossover periods.

When the decision to call off matches is taken, the Head Groundsman needs to be an integral part of the decision making process as using a pitch when conditions are very poor can cause long lasting damage to the sports pitches. Please contact your league regarding local regulations on the cancellation of matches.

Where possible a cut off date should be introduced for the end of the football season so that renovation work can take place in preparation of the cricket season. Where this is not possible it is important that a compromise solution found. Examples of solutions include moving the start time of matches to accommodate both sports, and moving the location of matches away from home. This may involve co-ordinating fixtures with the respective leagues so early consultation with them is essential.

At Sawston, there are two dates in the year whereby each sport cannot play past. This allows each club the ability to obtain priority usage of the site while allowing the grounds team time to plan the maintenance work required. The football season does start before the end of the cricket season but each year the football club liaises with its league to ensure the first few matches are played away.



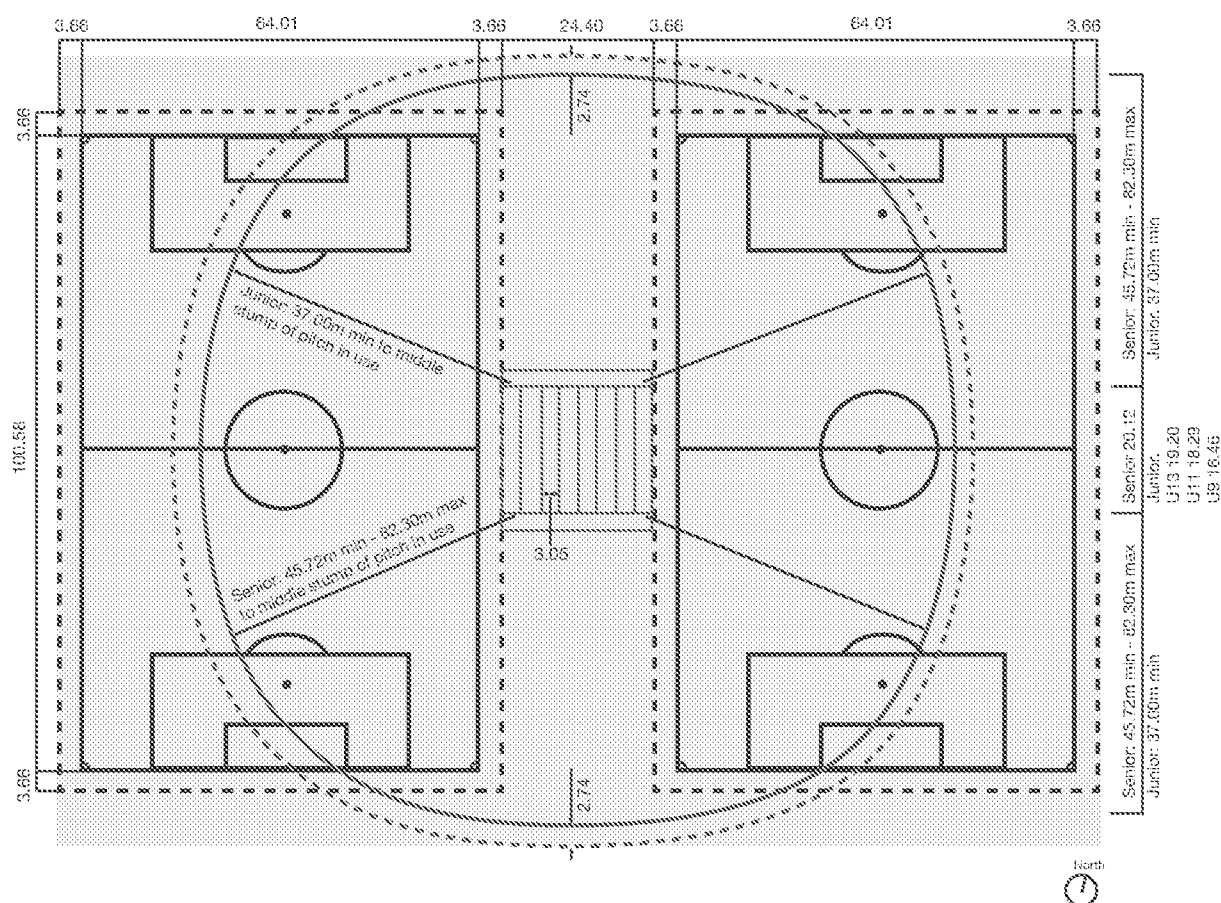
4. Factors Affecting the Capacity of a Site continued

4.2 Pitch layout and orientation

Layout of the pitches is very dependent on each individual site but consideration should always be made for the areas of most wear and tear. Allowing these areas to recover during the off season will help provide a sustainable site.

Pitch orientation is an important consideration when laying out the site's pitches. The orientation of the pitch can have a significant impact on the game as the setting sun can cause considerable disruption. Therefore pitches broadly need to have a North South orientation, but please consult the Sport England guidance document, 'Natural Turf for Sport' for more details. Note that the correct orientation of pitches is absolutely essential for cricket facilities, but dependent on the shape of the site, is desirable for football.

It is extremely important to understand that using exactly the same pitch layout year on year will mean that wear will be concentrated on certain areas, like the goal mouths and centre circles. If space allows, you should consider off-setting the location of the pitches to ensure that the areas of most wear are changed each year. You could look at three year pitch layout rotation which gives the hard wearing patches time to recover.



Source: Sport England Guidance - Natural Turf -
Combined Winter Sports and Cricket (8 Wicket Pitch)

4. Factors Affecting the Capacity of a Site continued

4.2 Pitch layout and orientation continued

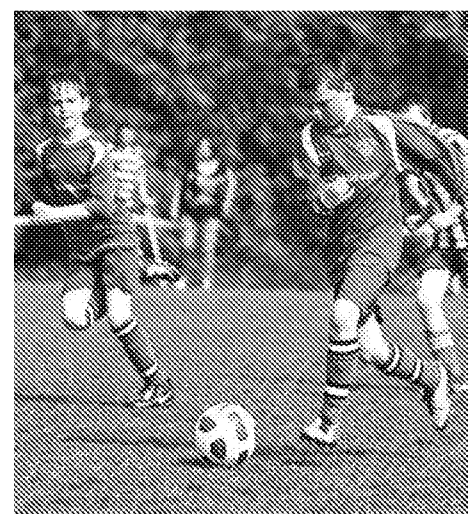
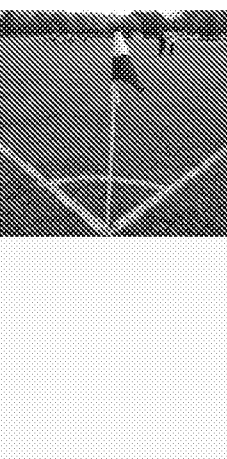
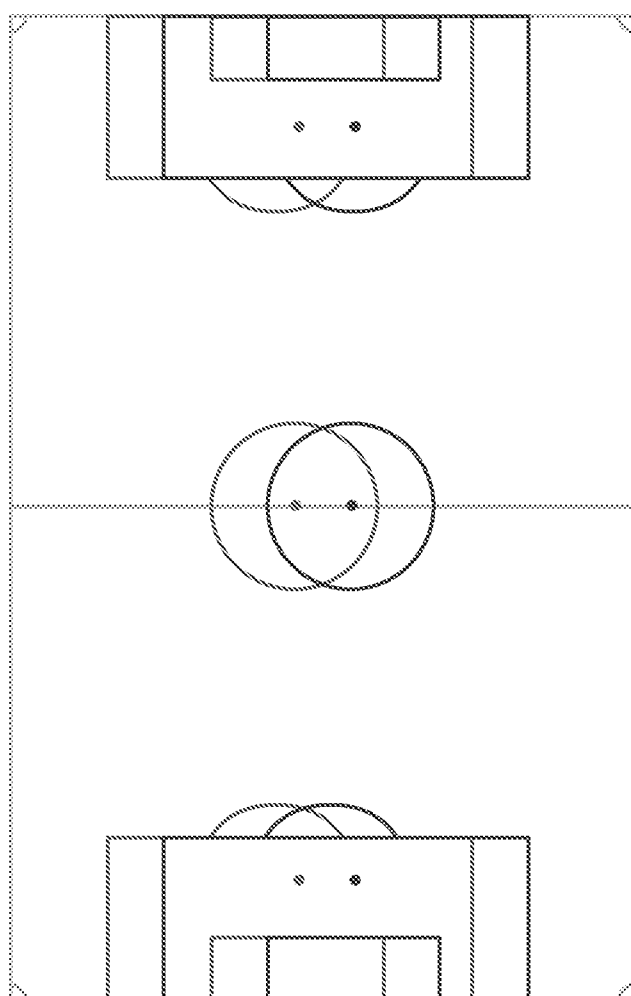
The selection of football goalposts is essential to the feasibility of pitch rotation. Mobile counter-weighted goalposts are the most desirable option as these can be moved relatively easily to facilitate pitch rotation.

The use of socketed football goalposts requires multiple holes to be created and an appropriate solution needs to be found to cover and protect them during the summer months while cricket is played.

If freestanding goalposts are to be used please ensure these meet the British Standards and are correctly anchored according to the manufacturers guidelines.

All goalposts should meet the relevant current standards, specifically BS EN 748 (2004), BS 8461:2005+A1:2009 and BS 8462:2005+A2:2012.

The example below shows what can be done on an area with a 70m width. The two football pitches are 60m in width and by creating three goalpost sockets you can easily move a pitch to rotate the hard wearing areas around.



4. Factors Affecting the Capacity of a Site continued

4.3 Environmental factors

The environment and the management of resources can have a significant impact on the maintenance and management of sports pitches. The impact of climate change is having a significant impact on our weather with increased periods of more extreme weather.

This causes challenges in the preparation of pitches which will require more careful planning and management of resources.

Trying to minimise the effect of extreme weather can be achieved through a variety of sources depending on the problem.

Water management is a key consideration in both periods of high and low rainfall. As rainfall increases it may become necessary to obtain covers to protect run ups for cricket matches or introduce a new drainage system. Information on major capital schemes such as drainage is covered later in Section 6.

As we experience longer dry periods the need for an irrigation system could become essential. The water for such a system could come from a rain water harvesting system using the clubhouse as a collection point or water extraction from a local natural source. These projects would need further investigation from an appropriate professional and may need approval from the local planning department and environmental agency.



The increase in flooding in recent years has had an impact on the maintenance regimes of clubs. This not only relates to the protection and reinstatement of the playing areas, but also the protection of assets such as machinery.

Consideration needs to be made to the storage of fuels and chemicals to prevent damage and contamination. Under current legislation, detailed in Appendix 2, all fuels and chemicals need to be stored in a secure and well ventilated place.

These environmental factors offer both challenges and opportunities and, as technology is improving, this can result in a more efficient use of resources and improved maintenance practices.



5. Maintenance

5.1 Regular maintenance



The quality of maintenance undertaken on playing surfaces has a major impact upon the deterioration of the pitches during the playing season.

Savings made on maintenance contracts are often smaller than the additional costs of repair/renovation work required at the end of the playing season, resulting in a false economy of saving.

Therefore, focusing on recommended maintenance programmes will result in a playing surface that requires less repair/renovation when moving from winter sports to summer sports usage. For joint football and cricket sites there are some common maintenance issues such as compaction of soil, uneven surfaces and bare patches. To address these types of problems some key considerations are:

- Regular quality mowing with well maintained machinery.
- Access to a water supply to provide irrigation whenever necessary.
- Weed control to ensure only desirable grasses are present in the sward.
- The use of approved marking materials; users can be injured by the use of inappropriate materials. The use of these inappropriate materials is often illegal.
- Pitch rotation where possible to allow hard stress areas time to repair.

Performance Quality Standards (POS) are an objective method of assessing a playing surface against set standards for the playing surface in question. This system is useful in helping to monitor the effectiveness of the long-term management of a playing surface and in setting standards for contractual maintenance works.

For more information, contact the IOG (see page 19).



5. Maintenance continued

5.2 Renovations and managing season handover period

Managing a playing field with both cricket and football pitches does provide some challenges, especially in the change over period between seasons.

The change over between the two sports does allow an opportunity to undertake some important and necessary repair work. This repair work is critical to the long term use of the pitches and failure to undertake this can lead to a deterioration of the pitches over time.

It is essential to build in time to make repairs and allow them to establish. Some of the common issues that need to be managed are:

- Grass gets damaged very easily and needs to recover. Some key considerations to assist in the recovery are:
 - Compaction of the soil reduces grass growth and drainage so aeration should be increased as usage levels increase.
 - In hard wear areas it is necessary to repair the surface levels.
 - The use of fertilisers and pesticides is essential in the establishment and growth of the grass plant.
 - Allowing sufficient time for new sward to establish and recover so that a good grass covering is in place.
- Each sport does have different requirements and these need to be considered and addressed. The change over period between seasons allows for some of these considerations to be addressed.
- It is also important to educate the site users so they are aware of why certain activities are happening and understand the need for a balance between all the users.

Examples of good and poor practice relating to maintenance regimes are provided below:

Good Practice:

- Routine mowing with sharp well set cutting units; this increases plant density and increases the plant's ability to resist wear damage, thus reducing repair/renovation costs.
- Annual testing of available soil nutrients to facilitate the replenishment of nutrients shown to be deficient.
- As usage increases, increase the amount of soil de-compaction undertaken to assist in maintaining a healthy sward.

Poor Practice:

- Infrequent mowing, especially with blunt cutting units; this weakens the plant and reduces rooting depth, thus reducing the plant's ability to withstand wear.
- Use of a heavy roller to level the surface; this compacts the high points, reducing the ability of desirable grasses to establish, leading to ingress of weed grasses which do not withstand normal levels of usage well.
- Not over-seeding annually; this results in an aging sward which is less able to resist the level of usage with passing years, resulting in increased levels of wear with passing years.
- Using areas of the playing surface which are normally subject to high levels of wear for training e.g. goal mouths.

5. Maintenance continued

5.3 Example Management Schedule

This calendar presumes a financial year end date of 31 December.

Month Actions required

January	• Setting of yearly budget • Scheduling of fixtures for upcoming season – Cricket
February	• Quarterly Grounds Management Committee meeting • Technical site inspection – nutrient analysis • Yearly machinery maintenance
March	• Training of staff
April	• Reduce compaction in high impact areas like goal mouth and centre circles. • Reseed and establish sward in worn areas. • Prepare outfield for cricket correcting any level issues and adjusting the cut height on the mowers accordingly to achieve the correct height of grass
May	• Quarterly Grounds Management Committee meeting
June	• Technical site inspection – full PQS review • Order of materials for end of season renovations • Order of specialist machinery for end of season renovations
July	• Scheduling of fixtures for upcoming season – Football
August	• Quarterly Grounds Management Committee meeting
September	• Reseed and establish sward in worn areas. • Prepare pitches for football by correcting any level issues and adjusting the cut height on the mowers accordingly to achieve the correct height of grass.
October	• Training of staff
November	• Quarterly Grounds Management Committee meeting • Audit of assets • Identify asset replacement plan for year
December	• Feedback ground requirements for following year to Committee/Management Group



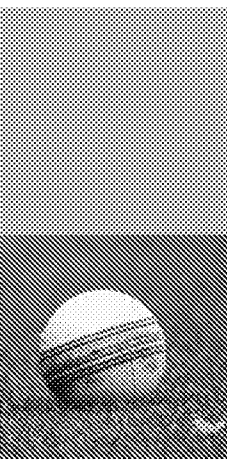
6. Improvements/Large Scale Works

When the grounds experience structural failures or the design of the site is no longer fit for purpose, it may be necessary to consider and implement large scale redevelopment works.

These could range from drainage projects to the construction of new playing fields.

When embarking on a project of this size it is important to consider the following:

- Site investigations will need to be taken by an appropriately qualified sports turf consultant to assess the feasibility of the proposed works.
- The cost benefit of the proposed works needs to be assessed to ensure it is the best long term solution for the site as improvement works can increase significantly yearly maintenance costs.
- The level of resources available for ongoing maintenance does affect the initial design of the works to be carried out.
- Consider the year round impact on all users of the facility of any proposed works as these will vary from sport to sport. For example drainage of a football pitch may ensure a couple of extra matches are fulfilled each year but without summer irrigation it could result in an unsafe outfield for cricket.
- Ensure the design consultants have been informed about the knowledge and skills of the maintenance team's ability to manage the pitches after the works are completed.
- Planning for a large scale project is important and should begin at least a year ahead.
- The timing of major works needs to be carefully considered to reduce the impact on the activities of each sport and reduce the risk of delays due to inclement weather. This may lead to plans being put in place to relocate for a season.
- The designer should provide a management and equipment schedule, prior to contracting the works, so clubs can check that the design can be maintained within their budget and resources.
- Make sure all the pros and cons of any large scale works are considered and evaluated at the feasibility stage.
- The use of an experienced project manager, even on small projects, is strongly advised to manage the contractual works and ensure the project is completed successfully.



7. Support, Guidance Documents and Useful Contacts

There is an extensive support structure within the England and Wales Cricket Board (ECB), Football Association (FA), Institute of Groundsmanship (IOG) and Sport England (SE) that can provide advice to clubs on the issues raised throughout the document.



ECB Places Team

The ECB Places team has dedicated staff to provide advice to organisations in developing and managing their facilities. The contact details are as follows:

Facilities and Investment Managers facilities@ecb.co.uk

Tim Nicholls – South West & Wales
tim.nicholls@ecb.co.uk

John Huband – Midlands
john.huband@ecb.co.uk

Chris Whitaker – London & East
chris.whitaker@ecb.co.uk

Dan Musson – North
daniel.musson@ecb.co.uk

There is also a network of ECB Pitch Advisers and County Groundsmans Associations who can provide specialist knowledge and support to organisations on a local level. For further details please contact your relevant ECB Facilities and Investment Manager.

At the time of publishing, cricket is the only sport with a technical advisory service but others may have systems in place in the future. Please contact your National Governing Body (NGB) to find out more.

The ECB has relevant guidance documents and resources to support clubs in developing their facilities, as follows:

- TS4 - Recommended Guidelines for the Construction, Preparation, and Maintenance of Cricket Pitches and Outfields at all Levels of the Game.
- TS6 - Performance Standards for Non-Turf Cricket Pitches Intended for Outdoor Use.
- Developing a Project - From Concept to Completion.
- Developing Your School Site.
- Sustainable Clubs - This web resource on the Places website seeks to highlight the changes that might be considered to improve a club and provide opportunities for much needed income and cost savings.

All guidance documents can be downloaded from www.ecb.co.uk/places

7. Support, Guidance Documents and Useful Contacts continued



FA Facilities and Investment Team

The FA has dedicated staff at a Regional level and within each County Football Association to provide advice to clubs on developing and managing their facilities. The contact details for the Regional Managers are as follows:

Mark Liddiard - East
mark.liddiard@theFA.com

Eamonn Farrell - North West
eamonn.farrell@theFA.com

Stuart Lamb - South East
stuart.lamb@theFA.com

Dylan Evans - London
dylan.evans@theFA.com

Mark Coulson - North & Yorkshire
mark.coulson@theFA.com

Matt Bartle - East Midlands
matt.bartle@theFA.com

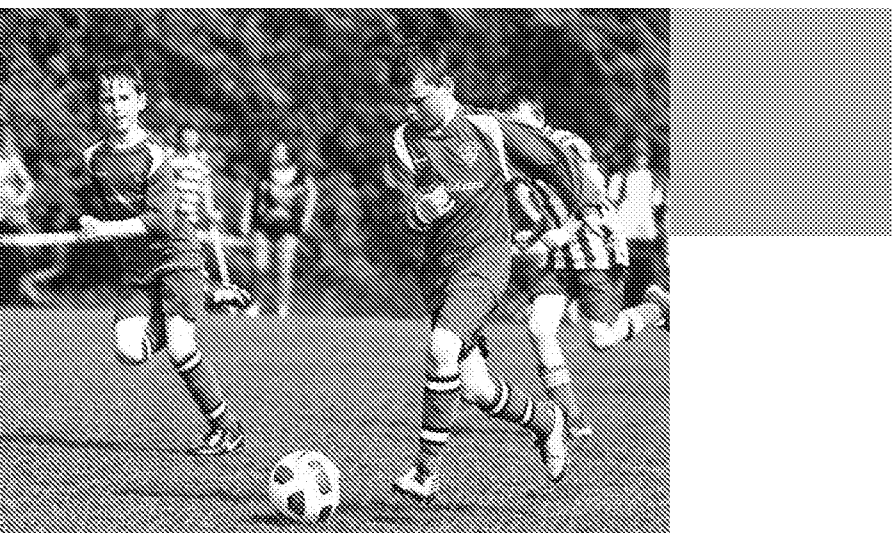
Simon Wood - South West
simon.wood@theFA.com

Hannah Buckley - West Midlands
hannah.buckley@theFA.com

The FA also has relevant guidance documents to support clubs in developing their facilities, as follows:

- The FA's Outdoor Pitch Guidance Notes.
- Grass Pitch Quality Performance Standards.
- The FA's IOG Groundsman Guidance Document.
- The FA Guide to Pitch and Goalpost Dimensions.

All guidance documents can be downloaded from www.TheFA.com/my-football



7. Support, Guidance Documents and Useful Contacts continued



IOG

The IOG delivers a variety of groundsmanship training courses to meet the needs of the groundscare industry, ranging from foundation level to management level. Please visit the IOG website at www.iog.org or call the Training and Education Team at Head Office on 01908 312511 for more details.

The IOG also have a network of Regional Advisors to support groundsmen around the country whose details are below.

Andrew Clarke – East Anglia
aclarke@iog.org

Ian Norman – London & South East
inorman@iog.org

Allan Moore – Midlands
amoore@iog.org

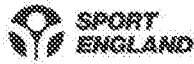
Len Smith – Wales,
South & South West
lsmith@iog.org

Ian Mather-Brewster – North
imather-brewster@iog.org

For more information on the IOG Performance Quality Standards, please contact your relevant IOG Regional Advisor or IOG Head Office.



7. Support, Guidance Documents and Useful Contacts continued



Sport England Guidance

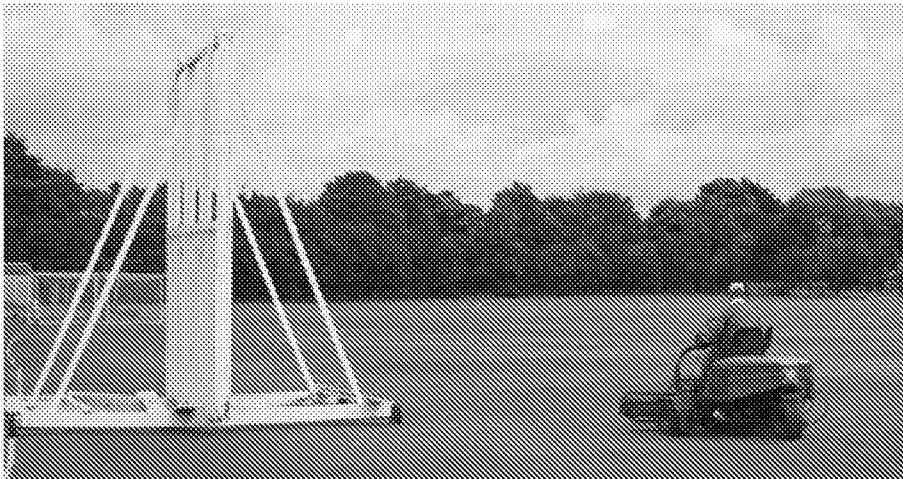
Sport England (SE) provides a range of facilities and planning services that are designed to develop strategic planning for sports facilities across England. It tries to ensure that the development of new sports facilities are underpinned by a robust needs and evidence base. SE aims to improve facility design and modernisation to raise standards across the sector, with a series of detailed Design Guidance Notes. It also fulfils its duties as a statutory consultee on playing field redevelopment. Please visit the SE website at www.sportengland.org for more details.

Sport England has a range of specific guidance sections relevant to this document which include:

- Accessible sports facilities.
- Artificial sports lighting.
- Artificial sports surfaces.
- Natural turf for sport (including downloadable CAD drawings).
- Pavilions and club houses.
- Other design guidance (including Comparative sizes of sports pitches and courts, Environmental sustainability check list).
- Cost Guidance (including Facility life cycle costs for Natural turf pitches).
- Frequently asked questions.

All guidance can be downloaded from the Design and cost guidance section of the Sport England website:

www.sportengland.org/facilities_planning/design_and_cost_guidance.aspx



Appendix 1

	A	B	C	D	E	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	F
Costs	Yearly Budget	Forecast	Final Budget (A+B)	Actual spend (F)	Budget vs Actual (C-D)													Total Spend
Materials																		
Loam																		
Seed																		
Fertiliser																		
Pesticide																		
Line marking materials																		
Utilities and fuel																		
Water																		
Diesel																		
Other																		
Training courses for staff																		
Staff costs and wages																		
Full time staff																		
Part time staff																		
Expenses																		
Machinery and Equipment																		
Servicing																		
Hire of specialist equipment																		
Replacement																		
Specialist services (eg tree cutting)																		
Total																		

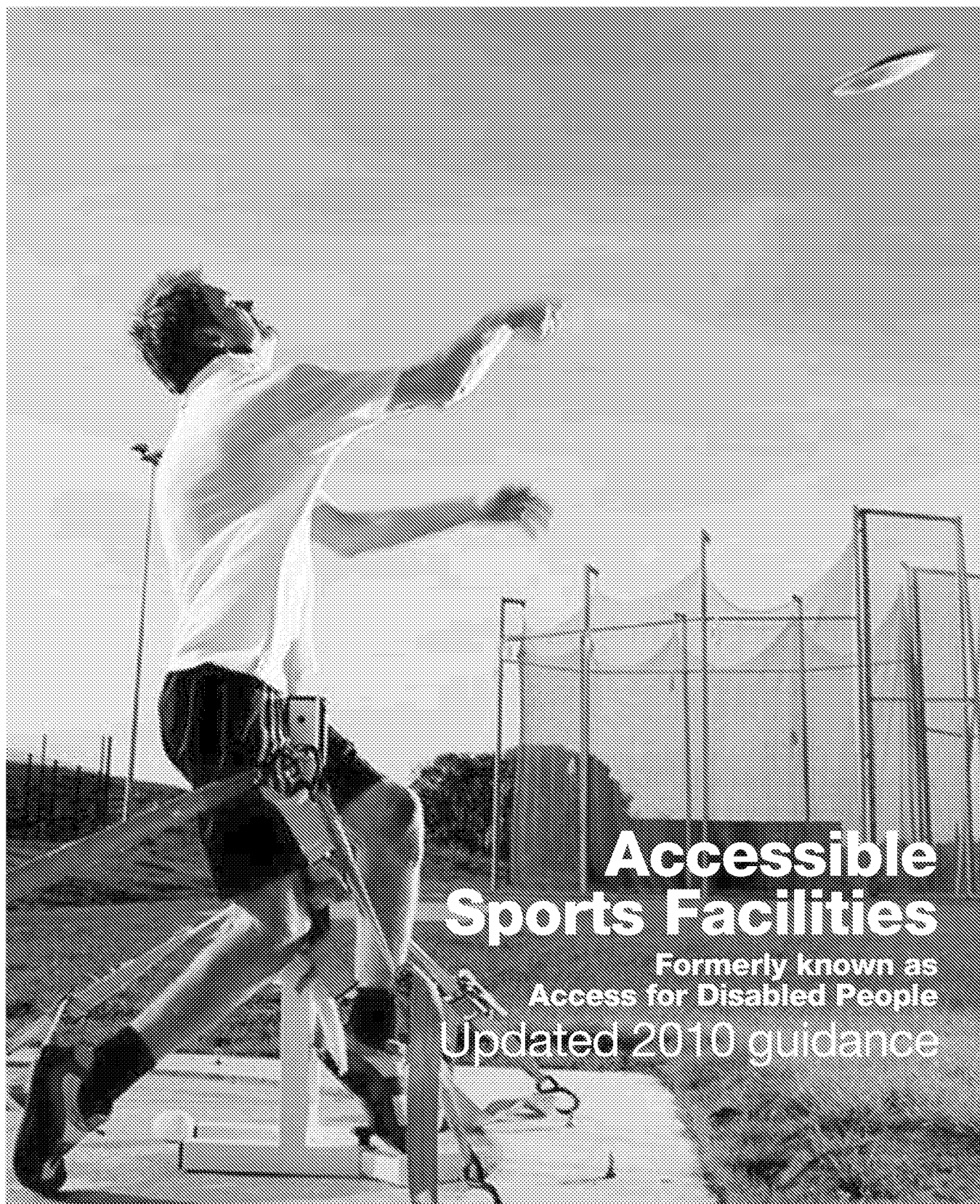
Example template budget for a joint cricket and football ground

Legislation

There is a duty of care for all site providers to ensure that all pitches are safe to play on. Legislative considerations include:

- Control of Substances Hazardous to Health (COSHH).
- Goalpost safety - BS EN 748 (2004), BS 8461:2005+A1:2009 and BS 8462:2005+A2:2012.
- Alternatives to permanent goal sockets in cricket outfields.
- Storage of sports equipment, machinery and substance likely to cause environmental damage (case studies of prosecutions).
- Site access for maintenance equipment and emergency services.
- Ground-water regulations.
- Oil storage regulations.
- Provision of Work Equipment Regulations (PUWER).
- Personal Protective Equipment at Work Regulations 1992 – over-view.
- Food and Environmental Protection Act 1985.
- Control of Pesticides Regulations 1986, amended 1997 and amended Codes of Practice.

For further information on any of the above please visit www.hse.gov.uk or the IOG website www.iog.org



Accessible Sports Facilities

Formerly known as
Access for Disabled People
Updated 2010 guidance

Foreword

Sport England believes that good facilities are fundamental to developing sporting opportunities for everyone, from the youngest beginner to the international class athlete. The buildings whether large or small can encourage civic pride and assist the process of revitalising deprived neighbourhoods. Facilities that are well designed built to last and well maintained are a pleasure to use and give an ample return on the time and money invested in their construction and day to day use.

Good design needs to be based on a sound understanding of such issues as the current trends and practices within individual sports, developments in the sport and leisure industry and the lessons to be learnt from previously built schemes.

Good design needs to be embraced within the earliest vision statement for a particular project and enshrined in the initial briefing stage through to the final detailed specifications and operational arrangements.

Sport England's Design Guidance Notes aim to:

- *Increase awareness of good design in sports facilities.*
- *Help key building professions, clients, user representatives and other stakeholders to follow best practice.*
- *Encourage well designed sports facilities that meet the needs of sports and are a pleasure to use.*



Sport England Design Guidance Notes aim to promote a greater general understanding of overall design concepts, an appreciation of technical issues and the critical factors that need to be considered in reaching the appropriate solution for a particular project. They also advise where further information, advice and expertise may be found and point to benchmark examples.

Contents

1.0 Introduction	4	11.0 Finishes	53
• Disabled People • The Legislative Context		• Acoustic Requirements • Visual Requirements	
2.0 The Inclusive Design Process	8	12.0 Services	56
• Accommodating Sports Chairs • Adapting and Improving Existing Buildings • Access Audits		• Electrical Services • Heating • Lighting	
3.0 Arriving At The Facility	12	13.0 Management Issues	57
• External Features		14.0 Spectator/Viewing Provision	58
4.0 The Entrance	19	15.0 Swimming Pools	60
• Foyer/Reception Area		• Changing Areas • Showers • Route to the Pool • Pool Design • Access to the Water • Equipment and Environment	
5.0 Internal Circulation	23	16.0 Sport-Specific Requirements	67
• Corridors • Ramps • Stairs • Handrails • Doors • Lifts		• Boccia • Canoeing • Fitness Suite • Goalball • Power-lifting • Sailing • Shooting	
6.0 Emergency Escape	33	17.0 Wheelchair Sports	74
• Fire Evacuation		• Athletics (indoor and outdoor) • Badminton • Basketball • Bowls • Cricket • Fencing • Rugby • Table Tennis • Tennis	
7.0 Changing Areas	36	18.0 Access In The Countryside	79
• Main Changing Areas • Equipment • Unisex Accessible Changing • Showers		19.0 Conclusion	79
8.0 Toilet Provision	46	20.0 Contacts	80
• Unisex Accessible Provision			
9.0 Social Areas	49		
• Furniture • Served • Vending Machines			
10.0 Communication Systems	50		
• Public Telephones • Public Address Systems • Text Phones • Induction Loops • Infrared Systems • Controls • Signs			

Accessible Sports Facilities

Design Guidance Note

Contents - Tables and Figures

Tables	Description	Page
Table 1	Disabled people participate and compete in a wide range of sports	5
Table 2	Accessible car parking spaces – requirements	13
Table 3	External doors – requirements	19
Table 4	Reception area – requirements	20
Table 5	Internal doors – requirements (except accessible toilets and changing rooms)	28
Table 6	Accessible Passenger lift car & door sizes	30
Table 7	Lifts – minimum clear door width requirements	31
Table 8	Changing areas – requirements	44
Table 9	Accessible toilet provision – requirements	46
Table 10	Family / disabled cubicles - requirements	61
Table 11	Pool equipment – requirements	61
Table 12	Typical dimensions for sportschairs	74

Figures	Description	Page
Figure 1	Accessible car parking bays	13
Figure 2	Setting-down point	14
Figure 3	Designing an access route	15
Figure 4	Reception area	21
Figure 5	Reception desk - key dimensions	22
Figure 6	Internal circulation for facilities WITHOUT 'Sports Chair Zones'.	24
Figure 7	Internal circulation for facilities WITH 'Sports Chair Zones'.	25
Figure 8	Entrance lobby for sportshalls and tennis centres - minimum dimensions	25
Figure 9	Internal lobby for sportshalls and tennis centres - minimum dimensions	25
Figure 10	Doors – clear widths	27
Figure 11	Doors – side clearances	27
Figure 12	Doors – location of vision panels	28
Figure 13	Lift – critical details	30
Figure 14	Accessible team changing facilities	36
Figure 15	Accessible group changing facilities	37
Figure 16	Unisex accessible changing room	40
Figure 17	Unisex accessible changing room with fixed bench seat	40
Figure 18	Unisex accessible changing room with shower, WC and fixed bench seat	41
Figure 19	Unisex 'Changing Places Facility' (see BS8300 figure 58) where assisted change is to be provided.	42
Figure 20	Accessible changing cubicle within a main changing room	43
Figure 21	Key vertical dimensions to accessible shower area	44
Figure 22	Typical shower area for general use incorporating changing bench	45
Figure 23	Accessible shower cubicle incorporated into main shower cubicle area	45
Figure 24	Standard unisex accessible WC (left hand transfer)	47
Figure 25	'Sports Chair Zone' unisex accessible WC with power operated door set	47
Figure 26	Key vertical dimensions and fittings to accessible WC and changing area	47
Figure 27	General toilet provision incorporating wheelchair accessible toilet facilities	48
Figure 28	Signs and controls	51
Figure 29	Section indicating raised platform to bleacher seating for elevated wheelchair viewing	59
Figure 30	Typical sections through side or end ditch	77

1.0 Introduction

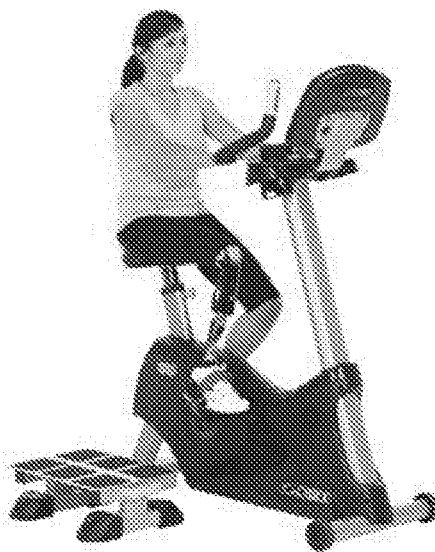
This guidance note sets out Sport England's advice on meeting the needs of the widest range of people in the design, operation and maintenance of sports facilities, following the principles of Inclusive Design. This includes considering the needs of parents with young children, older people, alongside the needs of disabled people – people with sensory, cognitive and mobility impairments, including wheelchair users.

This guidance note should be read alongside the other good practice documents referenced throughout this note and other relevant guidance available from the Sport England website

Other key reference should include the following:

- Olympic Delivery Authority's Inclusive Design Standards
- BS8300 : 2009 'Design of buildings and their approaches to meet the needs of disabled people – Code of Practice'
- FLA Accessible Stadia, 2004
- DfT Inclusive Mobility: a guide to best practice in the design of pedestrian and transport infrastructure.

Disabled people are disabled by poorly designed environments and providing add-on or special facilities creates segregation rather than inclusion. For example, the reason a wheelchair user cannot use the fitness equipment room in a sports centre is not because he or she is in a wheelchair. The design and management of the facility creates the barriers and limitations that disable. Consequently, the correct view would be that 'a wheelchair user cannot use the fitness equipment room because the equipment is inappropriate and / or the room is located on an inaccessible floor'. Or 'the person cannot use the fitness equipment room because the staff have not had adequate training'.



Disabled People

In the 2001 census 20% of the population claimed to have some form of disability. Disabled people have a wide spectrum of different and sometimes conflicting needs. Inclusive Design sets out to strike the best balance between all user needs and other demands on an environment, including cost.

- There are approximately 2,000,000 people in the UK with significant sight loss: of these, 364,615 are registered as blind or partially sighted¹. A logical layout, the use of colour, light levels and the avoidance of glare and clear signage are some of the design issues which are important to people with visual impairments.
- There are 8,945,000 deaf and hard of hearing people in the UK and there are 23,000 deafblind people in the UK. There are an estimated 50,000 people who use British Sign Language as their first or preferred language. There are 1,400,000 people who use a hearing aid regularly². The design of spaces to achieve good speech intelligibility, light levels and the avoidance of glare to assist lip reading, clear signage, as well as the installation of assistive hearing systems, such as induction loops are some of the design issues which are important to people with hearing impairments.
- There are 1,500,000 people with a learning disability in the UK. People with a learning

¹ Royal National Institute for the Blind

² Royal National Institute for the Deaf

Sport	Visual impairment				Learning disability				Mobility impairment				Wheelchair users			
	Recreational	National (GB)	International	Paralympics	Recreational	National (GB)	International	Paralympics	Recreational	National (GB)	International	Paralympics	Recreational	National (GB)	International	Paralympics
Angling	●	●	●		●	●	●		●	●	●		●	●	●	
Archery	●	●	●		●	●	●		●	●	●	●	●	●	●	●
Athletics	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●
Badminton	●				●	●	●		●				●			
Basketball					●	●			●	●			●	●	●	●
Billiards/cue sports					●	●	●		●	●			●	●		
Boccia	●	●			●	●			●	●	●	●	●	●	●	●
Bowls	●	●			●	●	●		●	●	●		●	●	●	
Boxing	●				●				●				●			
Canoeing	●	●	●		●	●	●		●	●	●		●	●	●	
Cricket	●	●	●		●	●			●	●	●		●	●	●	
Cycling	●	●	●	●					●	●	●	●				
Dragon boat racing	●	●	●		●	●	●		●	●	●		●	●	●	
Equestrian	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●
Fencing									●	●	●	●	●	●	●	●
Goalball	●	●	●	●												
Gymnastics	●	●	●		●	●	●		●	●	●		●	●	●	
Hockey	●	●			●	●			●	●			●	●	●	
Judo	●	●	●	●												
Netball					●	●							●	●		
Orienteering	●	●	●		●	●	●		●	●	●		●	●	●	
Rowing	●	●	●		●	●	●		●	●	●	●	●	●	●	●
Rugby union					●	●			●	●						
Sailing	●	●	●	●	●	●			●	●	●	●	●	●	●	●
Shooting	●	●	●	●									●	●	●	●
Skiing	●	●	●	●					●	●	●	●	●	●	●	●
Soccer	●	●	●	●	●	●	●		●	●	●	●	●	●		
Sub-Aqua	●				●				●				●			
Swimming	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●
Table tennis					●	●	●		●	●	●	●	●	●	●	●
Tennis	●				●				●				●	●	●	●
Trampoline	●				●				●				●			
Triathlon	●	●	●		●	●	●									
Volleyball					●	●	●		●	●	●	●	●	●	●	●
Water skiing	●	●	●						●	●	●		●	●	●	
Weightlifting/powerlifting	●				●	●	●		●	●	●	●	●	●	●	●
Wheelchair rugby													●	●	●	●

Note: Deaf or hard of hearing people take part in all sports at all levels of participation, so have not been specifically referred to in the table.

Table 1 Disabled people participate and compete in a wide range of sports.

disability find it harder than others to learn, understand and communicate. People with profound and multiple learning disabilities need full-time help with every aspect of their lives - including eating, drinking, washing, dressing and toileting³.

- There are 4,900,000⁴ people with mobility impairments and approximately 1.45% of the population, as a whole, are regular wheelchair users. Changes in level, gradients, surface finishes and travel distances are particularly important considerations when including people with mobility impairments.

It is important to remember that it is common for disabled people to have multiple impairments.

We live in an ageing society and there is a strong correlation between age and disability. Therefore, it is important that we design, manage and operate facilities in a manner which meets user expectations in the 21st century and allows the widest group of people to play an active part in sport as participants, spectators and members of staff.

By considering people's diversity, inclusive design seeks to provide an environment which addresses a wide spectrum of needs. In this way it can break down barriers and remove exclusion.

"The quality of buildings and spaces has a strong influence on the quality of people's lives. Decisions about the design and management of places can enhance or restrict a sense of belonging. They can

increase or reduce feelings of security, stretch or limit boundaries, promote or reduce mobility and improve or damage health"⁵. The aim of this guidance is to integrate a wide range of user needs into new and existing sports facilities.



The Legislative Context

Disability Discrimination Duties

The Disability Discrimination Act 1995 places a duty on employers and service providers to prevent discrimination against people on the grounds of their disability. This includes a requirement to make reasonable adjustments to policies, practices and procedures and to remove physical barriers to accessing services.

The Disability Discrimination Act (DDA) 2005 amends the DDA 1995 and places an additional duty on all public authorities, including local councils, to actively promote disability equality and take account of disabled people's needs, even where that involves treating disabled people more favourably than non-disabled people.

This latter requirement goes further than avoiding discrimination in the way a public authority delivers its services and functions. Public authorities are required to carry out an equality impact assessment of all policies and practices and to produce a Disability Equality Schemes (DES) and Action Plan describing how it will promote disability equality.

Adopting the principles of inclusive design should be seen as an important part of meeting these DDA duties. For more detailed information on the DDA please visit the Equality and Human Rights Commission website.

www.equalityhumanrights.com

³ MENCAP

⁴ UK National Statistics

⁵ CABE (2008) Inclusion by Design: equality, diversity and the built environment.

Building Regulations 2000 Part M

Part M of the Building Regulations sets minimum functional access standards for buildings, but it must be recognised that Part M does not cover all of the inclusive design issues which are important in the design of sports facilities or to a high enough standard to create truly inclusive environments. Therefore, Sport England expects designers to refer to Sport England guidance, as well as the 'Approved Document M' (currently 2004 edition) which supports Part M, when designing sports facilities.



2.0 The Inclusive Design Process

Inclusive design should be seen as a continuous process - from the initial concept, the design brief or master plan, through to the detailed design; the planning and building control approval processes; onto construction and the operation, management and maintenance of the completed facility. Each of these stages should be an inclusive process in themselves, involving potential users, including disabled people.

Involvement

The involvement of disabled people is a key element of Inclusive Design and is a requirement of the DDA 2005 for public authorities. Local sports user groups and Access Groups can be useful points of contact in this respect. The latter are a useful source to consult on a design, as they are able to give advice based on personal experience and local knowledge. Access Groups work in different ways and have different levels of experience and technical expertise. In most cases the membership of volunteers includes people with mobility impairments. Many of these Groups include people with hearing or visual impairments. However, only a small minority have members with learning difficulties or who use mental health services.

Inclusive Design Champion

Regardless of the scale of a redevelopment or new build project, someone involved with the design of a project must champion the principles of inclusive design. This should be undertaken from the early briefing stages for a scheme and provide on-going good practice advice and reviewing of the proposal at key stages to ensure that aims are being met. The Inclusive Design Champion must have a detailed technical knowledge and understanding



of the diverse and sometimes conflicting needs of disabled people within sports environments. This includes the needs of everyone, from people with sensory and cognitive impairments to people with mobility impairments, including wheelchair users. To give balanced recommendations the Champion must also have an appreciation of other users needs including children and older people. An understanding of design and construction is also important in order to understand the other demands on the design or redevelopment of a sports facility⁶.

How will people use the facility?

When designing a sports facility it is necessary to visualise how people will use the facility as a whole, from transport links, to the initial approach, through to specific areas, for example the changing rooms, the social area and activity spaces. It is also essential to identify the potential obstacles and restrictions that a disabled person may face. Depending on the type of facility, some key areas of consideration might be:

- Before a visit finding out what facilities are available via websites, brochures, telephone
- Booking in advance and knowing what access arrangements to expect
- Parking
- Arriving by taxi, bus or coach at a drop off point
- Finding and reaching the entrance
- Buying a ticket
- Passing through the entrance doors
- Finding and using the changing rooms
- Accessing and using the fitness room, court, pool, athletics track and other sporting areas
- Wayfinding
- Finding and using the toilet facilities.
- Finding and using the social facilities.
- Finding a convenient seat/location from which to view a game with friends.
- Most importantly, how will they evacuate quickly and safely in an emergency

⁶ Registered Access Consultants may be suitable for this role, see the National Register of Access Consultants website at www.nracc.org.uk

Accommodating sports chairs

Over recent years the design of sports chairs has developed and in some cases sports chairs now require a design width of 1.2m making it impractical to achieve this throughout the facility. It is therefore essential to establish those areas where sports chair access is required to ensure proper access.

In facilities such as sports centres and tennis centres, where sports chairs are a key piece of sports equipment for some people and some sports, it is essential that the design of the building and the external works ensures that the sports chairs have unhindered access to all sports activities / facilities.

To achieve this a 'sports chair zone' must be established. This a zone where the circulation and the elements within it, such as doors and lobbies, are designed to allow large sports chairs to be used, manoeuvred and stored easily and safely. The minimum extent of the wheelchair zone in any sports chair facility consists of:

- The route from the site entrance, car park, setting down point to the entrance and reception area.
- The route from the entrance/reception to a safe, convenient and secure storage point for the sports chair.
- The route from the storage point to the activity area e.g. sports hall or outdoor/indoor tennis court
- The means of escape route from the activity area to a place of safety.

This will allow a user to arrive at the facility and enable them to push their sports chair in front of them, in most cases from their 'day chair', to and through the entrance and into the reception area.

From reception they will continue to push their sports chair to the secure storage point which must be conveniently located close to the changing areas. Having secured their sports chair they will then move to the changing and toilet facilities prior to returning to the secure area where they will transfer into their sports chair and then secure their day chair. Once in their sports chair the user will then travel to the sports activity space. After their sports activity the user will return to the secure storage to transfer into their day chair and will then either secure their sports chair and move into the other parts of the sports facility or return to reception and exit the facility.

In summary, when considering how disabled people will use any part of the facility it is important to ask the following questions:

- How will they find it?
- How will they reach it?
- How will they use it?
- How will they leave the facility?



Adapting and Improving Existing Buildings

Many sports facilities were designed and constructed in a way that makes the facilities difficult or impossible to use for many disabled people. In some of these, enlightened management practices have overcome many of the barriers to access despite the physical constraints of the building.

When altering or extending a sports facility, it is essential that the project be developed with the clear aim of achieving full accessibility. The first step in achieving this is to carry out an access audit. This will establish the current situation and inform the design and development of the project. It will help create the basis for a programme of works and a written access policy.

Extensions

All new extensions to sports facilities must meet the requirements of this guidance note and the design of the extension must improve access to the existing facility.

Alterations

Where substantial work is planned to an existing facility the project must aim to comply with the full requirements of this guidance. When making alterations or simply carrying out maintenance, the access implications and the potential for incorporating improvements within the proposed work should be carefully considered. The following points should be borne in mind:

- The proposed work must not make the access situation worse.



- Where it is not reasonably practicable to achieve current standards of accessibility, a costed and prioritised action plan should be prepared with the aim of achieving the requirements in the medium to long term. The action plan should also identify how the current arrangements can be managed in the short term. This may require changes in policies, practices and procedures to achieve the best level of accessibility in the circumstances; a written policy should be produced describing the potential barriers and identifying the arrangements to minimise the impact on disabled people.
- Most access improvements do not involve expensive complex changes to the physical environment or major changes to how it is managed.

Access Audits

The Inclusive Design Champion should carry out an Access Audit of an existing sports facility prior to developing maintenance programmes, redevelopment schemes or extensions, to inform the brief for the project. The Audit should highlight inclusive design issues which should be addressed within the proposals. The project must aim to make the existing facility meet current good practice, including meeting the standards in this guidance note.

Access Statements

An Access Statement should be prepared to explain how any new build or redevelopment proposals will address the principles of inclusive design.

An Access Statement should evolve throughout the briefing, design and construction process, beginning as a strategic document where aspirational, but achievable, aims are set for a project, developing into a detailed final document which is handed over to the owner of the sports facility on completion. The Statement should act as an agenda for an ongoing dialogue between all stakeholders at each stage of the project. It can help to ensure that inclusive design issues and their management implications are given due consideration alongside other demands made on a development, providing an audit trail of issues, assessments and actions. The exact form of a Statement will depend on the size, nature and complexity of the development.



Sport Scotland has produced detailed guidance on writing Access Statements, Facilities Report 03: Inclusive Design and Access Statements, 2008.

www.sportscotland.org.uk/ChannelNavigation/Resources/TopicNavigation/Publications/Facilities+Report+03.htm

3.0 Arriving At The Facility

Disabled people arrive at sports facilities by a variety of means, most commonly by car, minibus or taxi. However, arrangements should be made for those arriving by wheelchair, bicycle or on foot and, where possible, for those arriving by public transport. It is essential that there is clear signage and good lighting at the entry from the public highway indicating routes to:

- Car parking areas, specifically accessible car parking spaces.
- Setting-down point.
- Principal entrance to the facility via a safe route.

Car parking

Detailed guidance on the design of car parking areas is available in the 'Approved Document M' of the Building Regulations, in BS8300 and in Sport England's 'Car Park and Landscape Design' design guidance note available on the website. However the key issues are summarised here.

A car is essential for many disabled people to access sport and leisure facilities, so it is vital to provide suitable parking with unhindered access to the entrance:

- Provide at least the minimum number of specifically reserved, accessible car parking spaces for people with disabilities appropriate to the scale of the facility as indicated in Table 2.
- Group bays together and signpost their location from the main entrance to the site. See Figure 2 of BS8300.
- Bays must be clearly laid out and signed, both on the surface of the bay and by means of a vertical sign. See Figure 3 of BS8300.



Clear Signage at the entry from the public highway is essential

- Establish a management/supervision system to ensure that the designated parking bays are used only by people entitled to do so.
- Bays must be located as close as possible to the main entrance of the building. If the pathway to the entrance is uncovered the distance to the entrance must be no more than 50m; this can be increased to a maximum of 100m if the pathway is covered.
- The car park surface should be smooth and even. Unbound surfaces such as gravel are not acceptable.
- Kerbs must have dropped sections at all points where wheelchair users may want to cross. See BS8300.
- The height of ticket, swipe-card or key-activated car park barriers should conform to the requirements of BS 6571-4. See Figure 5 of BS8300.
- Vehicle height barriers should have vertical clearance of 2.6m to allow the passage of high conversion vehicles.
- Audible barrier controls must have alternative provision for people with hearing and speech impairment.

Provision	Clubhouses/pavilions (serving only natural turf pitches)	Clubhouses/pavilions generally	Full-size synthetic pitch	Multi-use games area	Fitness suite	Four-court sports hall	Six-court sports hall	Nine-court sports hall or larger	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
Minimum of 2 accessible car parking bays or 6%, whichever is the greater	2	2	2	2	2	4			4	2	4	4	2	4	4	4	4	4	8	
Minimum number of accessible car parking bays or 8% whichever is the greater						6	6	8	6		6	6	6		6	6	6	6	8	8
Setting-down point adjacent to the entrance	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Key:	● Required ○ Recommended																			

Table 2 Accessible car parking spaces – requirements

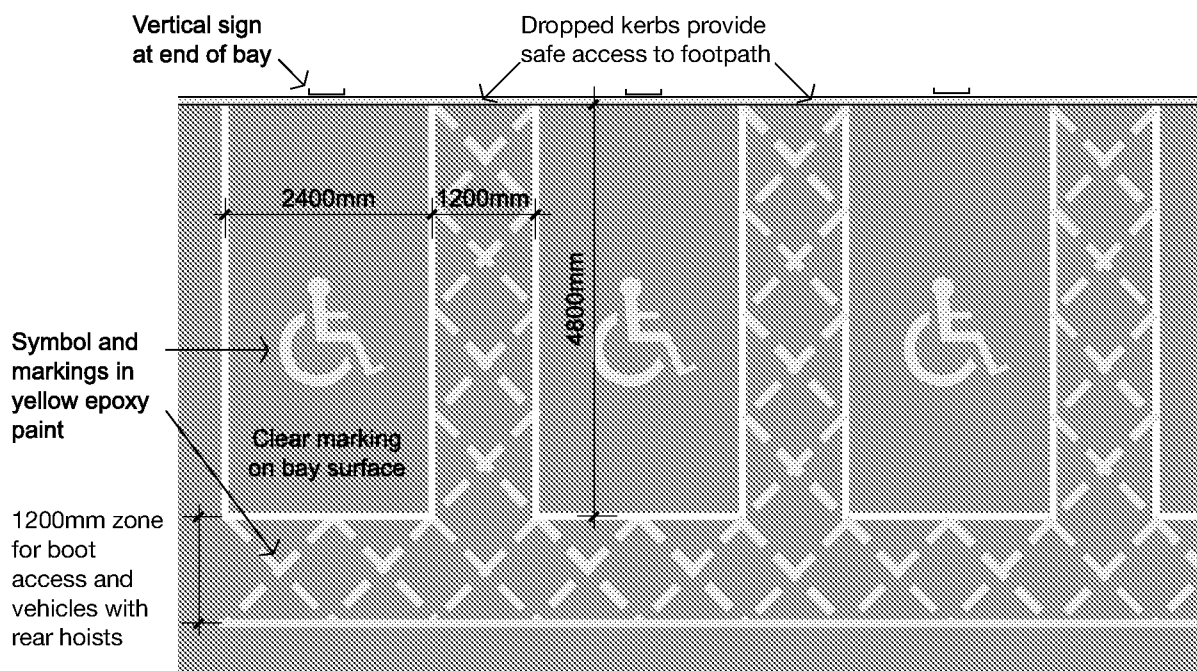


Figure 1 Accessible car parking bays

Setting-down point

A setting-down point must be provided. Ideally, this should be sheltered and immediately adjacent to the main entrance. Note the following points:

- The bay should be long enough to allow 'tail-loading'.
- For smaller facilities where a drop-off point at the main entrance may be impractical, the distance between the nearest drop-off point and the sports facility should be no more than 50m if the pathway is uncovered.

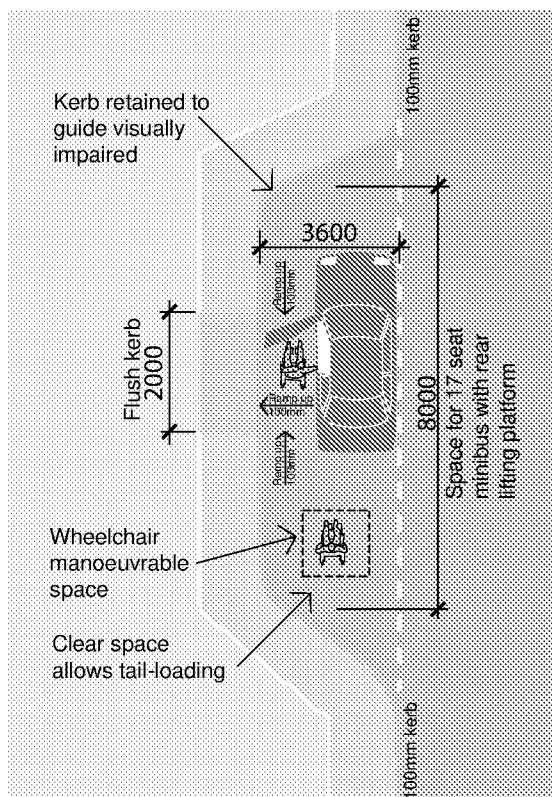


Figure 2 Setting-down point

Cycle Parking

Provision should be made for parking cycles in secure locations away from pedestrian routes.

Consideration should be given to providing weather protection to cycle parking.

Space should be available for adapted cycles and tandems.

Designers should refer to the DTI publication 'Inclusive Mobility' to ensure that the design and location of cycle parking is safe and appropriate. Many cycle racks are lower than 1.0m, the minimum height street furniture should be. In addition many cycle racks have no lower rail which

makes this furniture difficult to detect for blind and partially sighted people.

To enable everyone, particularly people with disabilities, to move conveniently and safely from their arrival point to the entrance, careful attention is needed to the layout and detail of paths, ramps, steps and handrails. All routes should give sufficient audible and tactile information, supplemented by visual clues, to help blind and partially sighted people

Routes to the facility

Detailed guidance on the access routes to and around buildings is available in Section 5 of BS 8300.

- Provide landmarks along routes to help orientation.
- Traffic routes should be clearly distinguishable from pedestrian routes through use of texture and colour.



A dedicated footpath with olfactory and tactile information will assist visually impaired people

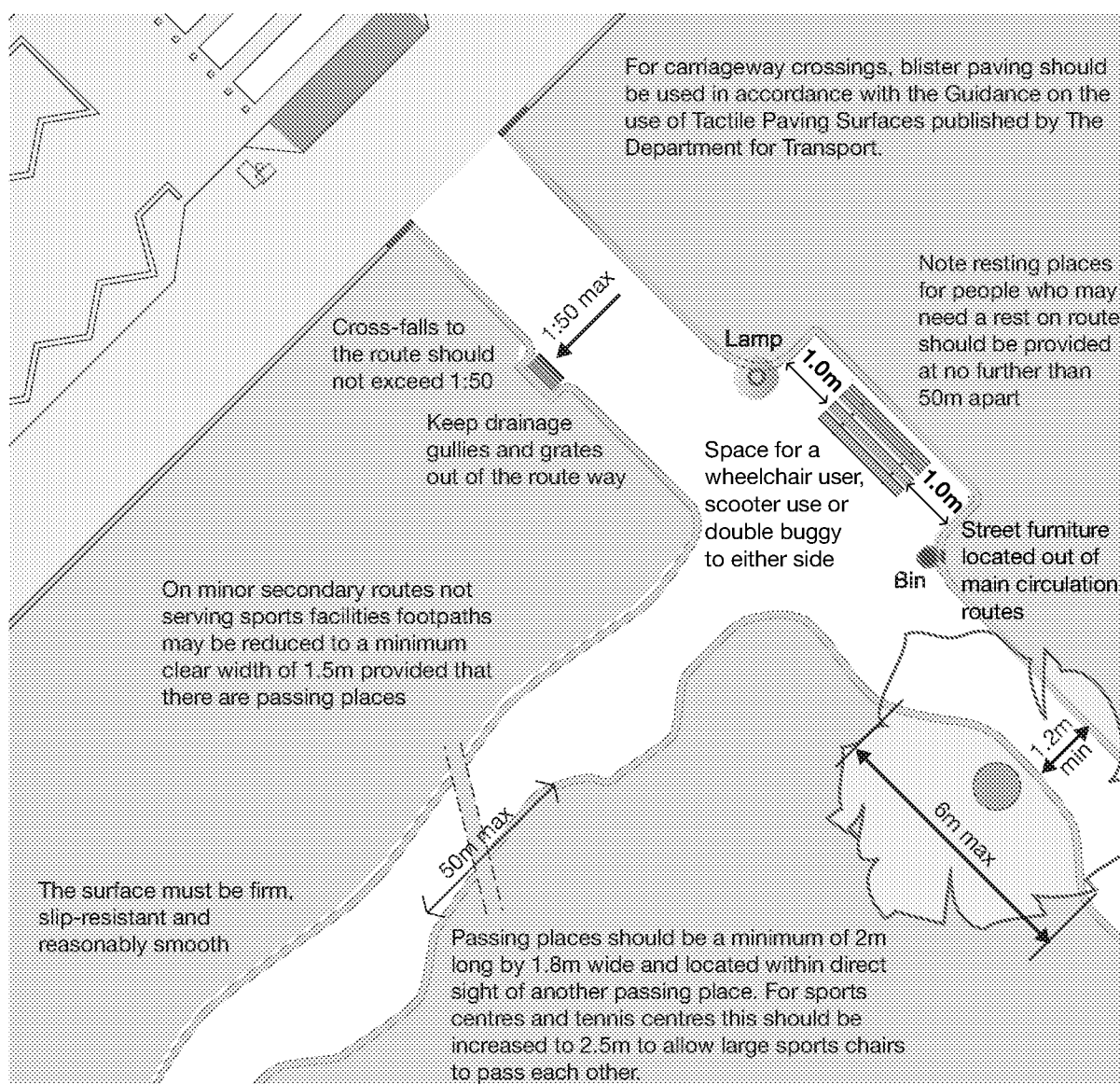


Figure 3 Designing an Access Route

- To be accessible, routes must be a minimum of 1.8m clear width where they serve sports facilities. This should be increased in large facilities.
- In sports centres and tennis centres the design of the route from the drop off point, car park and site entrance to the sports facility, indoor and outdoor facilities, must be designed and detailed to allow easy access for someone using a wheelchair who is also pushing their sports chair in front of them.
- Street furniture such as lamps, bins and so on must be out of the route way.
- At unavoidable pinch points no greater than 6.0m in length the path can be reduced to 1.2m min clear width.
- Splay corners at junctions to ease manoeuvring for wheelchair users.
- Ensure minimum clear height of 2.1m is maintained under trees, canopies, brackets and so on.
- Access routes should be level (ie less than 1:60) or have the shallowest gradient possible. Where the route is steeper than 1 in 60 but not as steep as 1 in 20, it must have a level landing for each 0.5m rise along the route. Wherever there is a change of direction in a ramp, a level landing must be provided. Where the gradient is 1:20 or steeper it must comply with the requirements for a ramp.
- Wherever the change in level along a route is greater than a single step then an alternative stepped approach should be provided as some people find it significantly easier to negotiate a short flight of steps than a ramp.

- Materials should be used thoughtfully. They can provide different sound and tactile qualities and, with proper use of colour, will aid location along the route. If used indiscriminately, however, they can be confusing and even dangerous.
- Where footpaths cross vehicle routes provide warning and guidance for blind and visually impaired people. Ensure there are no obstacles or hazards, for example gratings, to obstruct crossing points.
- Crossings should be at least 1.2m wide minimum.
- Careful design of planting schemes will aid location by providing scent and colour clues and in some instances can provide key landmarks for the visually impaired user. Ensure plants do not overhang route ways.
- On access routes on level ground provide seated resting places not more than 50m apart for people with impaired mobility. For routes where the gradient is between 1:21 and 1:60 additional resting places should be considered.

External Features

Layout

- Footpaths should be at least 1.8m wide minimum. At unavoidable pinch points around obstacles such as trees, an absolute minimum width of 1.2m is acceptable providing this does not exceed 6.0m in length.
- Provide splayed or rounded angles at junctions with other footpaths.
- Designers should refer to the DTI publication 'Inclusive Mobility' to ensure that the design and gradient of footpaths is safe and appropriate.
- Drainage cross-falls of footpaths should not exceed 1 in 50 as steep cross falls make it difficult to control a wheelchair.

Detailed guidance on the design of access routes to and around buildings can be found in Section 5 of BS8300 and Approved Document M.

Materials

All surfaces should be slip-resistant in all weather conditions.



- Unbound surfaces should be avoided on principal routes to and between facilities, for example gravel hogging.
- All surfaces should meet with a level and even junction.
- All gratings should be flush with paving and located beyond the boundaries of the access route.
- Block paving should be laid evenly.
- Dished drainage channels are trip hazards and should be avoided on access routes.
- Footpaths should be well illuminated to avoid the creation of contrasting pools of light and darkness (100 lux to steps and ramps, 50 lux on main routes).

Signs

Guidance for the design of signs can be found in Section 10 and The Sign Design Guide (see contact addresses).

Signs should be part of a carefully considered, comprehensive signage system to ensure that they are:

- Carefully located
- Clear, simple and logical
- Non-reflective.

Ramps

It is essential for ramps rising 0.3m or more to be accompanied by a short flight of steps for use by those who find negotiating a ramp more difficult than using steps.

Where it is not possible to use a level approach, a ramp will enable safe and convenient access for people with pushchairs or wheelchairs and for deliveries.

Issues to consider include:

- A gradient of 1 in 21 is considered level; any gradient steeper than this is classified as a ramp.
- The gradient should be as level as possible, between 1 in 20 for a maximum length of 10.0m and 1 in 15 for a maximum length of 5.0m.
- The absolute maximum gradient is 1 in 12 over a maximum length of 2m. This should be used only where no alternative is available.
- The surface colour of ramps should contrast visually with that of landings to enable visually impaired users to anticipate them.
- All ramps should have slip-resistant surfaces that are firmly fixed and easily maintained.
- Ramps should be illuminated to at least 100 lux.
- All ramps should be provided with handrails on both sides. Minimum clear width 1.3m except where sports chairs may be used – for example at tennis clubs or sports centres, in which case they should be at least 2.0m clear width. For long ramps, a wider ramp or the provision of passing points may be beneficial.
- If the ramp is exposed to the extent that people might feel vulnerable consider providing a solid balustrade.
- A minimum clear landing of 1.5m should be provided at the top and bottom of each ramp. All landings should be clear of door swings.

Detailed guidance and standards for ramps can be found in BS8300 and related sections of Approved Document M.

Steps

Some people, in particular ambulant disabled people, prefer 'easy going' steps and these should always be located adjacent to ramps.

- Do not use open risers; all risers should be solid.
- A minimum clear landing of 1.2m (1.8m preferred) should be provided at the top and bottom of each flight of steps. All landings should be clear of door swings.
- Straight flights are easier to negotiate than curved or dogleg flights. However, a series of straight flights can be intimidating to people with a fear of heights.
- Step treads and risers should be consistent and in the range of 0.15-0.17m for risers and 0.25-0.3m for treads.
- Avoid single, isolated steps.
- Twelve is the maximum number of risers in any flight.
- Each step nosing should contrast in colour and luminance with the adjacent tread.

Detailed guidance and standards for stepped access can be found in BS8300 and related sections of Approved Document M.

Handrails

Handrails are to be provided on both sides of all steps maintaining at least 1.0m clear width.

It is important that the handrail is available before a person starts climbing or descending a flight of steps. In order to facilitate this, the handrails must project horizontally beyond the top and bottom steps by at least 0.3m.

The colour or brightness of the handrail should distinguish it from its background.

Detailed guidance and standards for the provision and design of handrails can be found in Section 5.10 of BS8300 and related sections of Approved Document M.

Street Furniture

It is essential to locate street furniture carefully as it can create serious problems for people with sight impairment as well as causing obstacles for people with pushchairs and wheelchairs. Used correctly, street furniture can create interest and give visual clues to aid location.

Detailed guidance on the location of street furniture can be found in Section 5.7 of BS8300 and in Section 3.7 of Inclusive Mobility 2009.

The Approach

The entrance to the building should be an obvious feature on the facade. The message should be reinforced by the use of colour, lighting and signage. However, avoid large areas of uniform colour and texture in the hard landscaping. Use the opportunity to relate the building to its surroundings and avoid unattractive and desolate approaches as these can prevent people with visual impairment from locating the entrance and/or main routes.

The approach to the entrance should be designed so that hard and soft landscaping reinforces the route to and the location of the entrance.

Note the following requirements:

- The route to the entrance should be segregated from vehicles
- The route to the entrance from parking and drop off should be as short as possible, since many disabled people can only travel 50m with relative ease.
- Provide obvious and clear signage in the correct location.
- Avoid windows, doors and other objects projecting into pathways. All outward opening doors should be recessed or safeguarded by railings.
- Elements such as street furniture, columns and roof brackets should be carefully located and detailed so that they are not a hazard. Particular care should be taken adjacent to the building entrance.

- Provide appropriate seating adjacent to the entrance. Where there are pedestrian routes greater than 50m in length, provide seats/ resting places. There should be space to enable wheelchair users to rest beside seats. Seats and wheelchair spaces should be set back from the pathway.

Assistance Dog Toilet Areas

An assistance dog is likely to need access to a designated toilet area away from other activities.

Note the following requirements:

- The area should have a concrete surface easy to clean and have provision for regular sanitation cleaning.
- All facilities should have an assistance dog policy (see management section).
- It should be free from litter, glass and other harmful articles.
- Appropriate internal provision should also be considered.



Sports facilities must be designed and managed to be accessible to people with assistance dogs

4.0 The Entrance

The building should be designed to make the entrance obvious and the facility inviting to everyone. Ensure the following:

- The entrance should be easily distinguishable from the facade as a whole.
- The entrance must have a level area immediately in front of the entrance door to make the entrance more accessible to wheelchair users.
- The entrance should be accessible to everyone. There should not be a separate / segregated entrance for different groups of people.
- Entrance doors must be sited logically in relation to approach routes.

See BS8300 Section 6.

External doors

All large facilities, and those where a significant amount of wheelchair sport takes place, need to be fitted with automatically controlled doors. Avoid revolving doors.

Entrance doors should not be made of highly polished material such as stainless steel. They should, however:

- Be a suitable width for the scale and type of facility (see Table 3).
- Be fitted with level thresholds (maximum vertical projection 15mm).



- Be free of hazardous gratings adjacent to the door and its approach.
- Be distinguishable from adjacent walls and screens.
- Have vision panels.
- In smaller facilities where automatic doors are not provided, a doorbell or intercom should be provided to attract the attention of the staff for assistance.

Minimum clear width	Clubhouses/pavilions generally, except those serving tennis, athletics or outdoor basketball	Full-size synthetic pitch	Multi-use games area	Fitness equipment room	Four-court sports hall	Six-court sports hall	Nine-court sports hall or larger	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Basketball outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
1000mm	●	●	●	●					●			●	●	●	●	●	●	●	●	●
1200mm					●	●	●	●		●	●									
Automatic doors				○	●	●	●	●	○	●			●		○	○		●	●	●

Key: ● Required ○ Recommended

Table 3 External doors – requirements

Glazed doors and associated side panels should not incorporate fully glazed frameless entrance doors. They should:

- Be distinguishable from their surroundings, with features such as signs and logos located at eye level, that is 1.4–1.6m above ground level.
- Repeat safety markings at low level that is 0.85–1.0m if the glazing goes to the floor.
- Ensure these distinguishing features, are visible from both sides of the door.
- Comply with BS 6262–4.

Automatically controlled doors should:

- Have a sliding, bi-fold or telescopic arrangement – hinged (swing) or folding doors can be used in exceptional situations.
- Be designed to minimise the risk of accident as an automatic swinging or folding door can be a serious hazard. In particular, the leading edge should be protected so that people cannot walk into it. Also the leading edge should be highlighted to contrast with the rest of the door so that it is more easily detected.
- Be capable of manual operation in the event of power failure.
- Comply with BS 7036: Parts 1 & 2.

- Be operated by a sensor that prevents the door closing on users and is sensitive to people who are seated or children, as well as sensing someone who is standing.

In situations where an automatic ie sensor controlled, door control is not required but a power-operated door is to be provided. The ‘push-pad’ should be located at a height between 0.75–1.0m, be clearly visible and be of a contrasting colour and luminance to its background.

Entrance lobby

- The layout and dimensions of the entrance needs to be appropriate to the facility’s size and type. Where inner and outer (lobby) doors are provided the dimensions are critical for wheelchair users as they will need to be able to move clear of the first set of doors before encountering the second.
- The entrance lobby size and design should allow for a wheelchair user pushing either their sports chair or day chair in front of them as they enter the facility.
- A recessed cleaning surface/mat should be provided within the entrance lobby to prevent moisture being brought into the building on peoples shoes/wheelchair and buggy wheels. The mat must not create a trip hazard. Coire matting and similar materials must not be used.

Provision	Clubhouses/pavilions (serving only natural turf pitches)	Clubhouses/pavilions generally	Full-size synthetic pitch	Multi-use games area	Fitness suite	Four-court sports hall	Six-court sports hall	Nine-court sports hall or larger	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
Reception desk including ‘induction loop’					●	●	●	●	●	○	●	○	●	○	○	●	○	●	●	●
Public telephone	○	○	○	○	●	●	●	●	○	○	○	○	●	○	○	○	○	○	●	●
Textphone					○	○	●	●	○	○	○		○		○	○	○	○	●	●
Seating / resting area	○	○	○	○	●	●	●	●	●	○	●	○	●	○	●	○	○	●	●	●
Assistance dog rest					●	●	●	●	●		●		●	●	●	●	●	●	●	●

Key: ● Required ○ Recommended

Table 4 Reception area – requirements

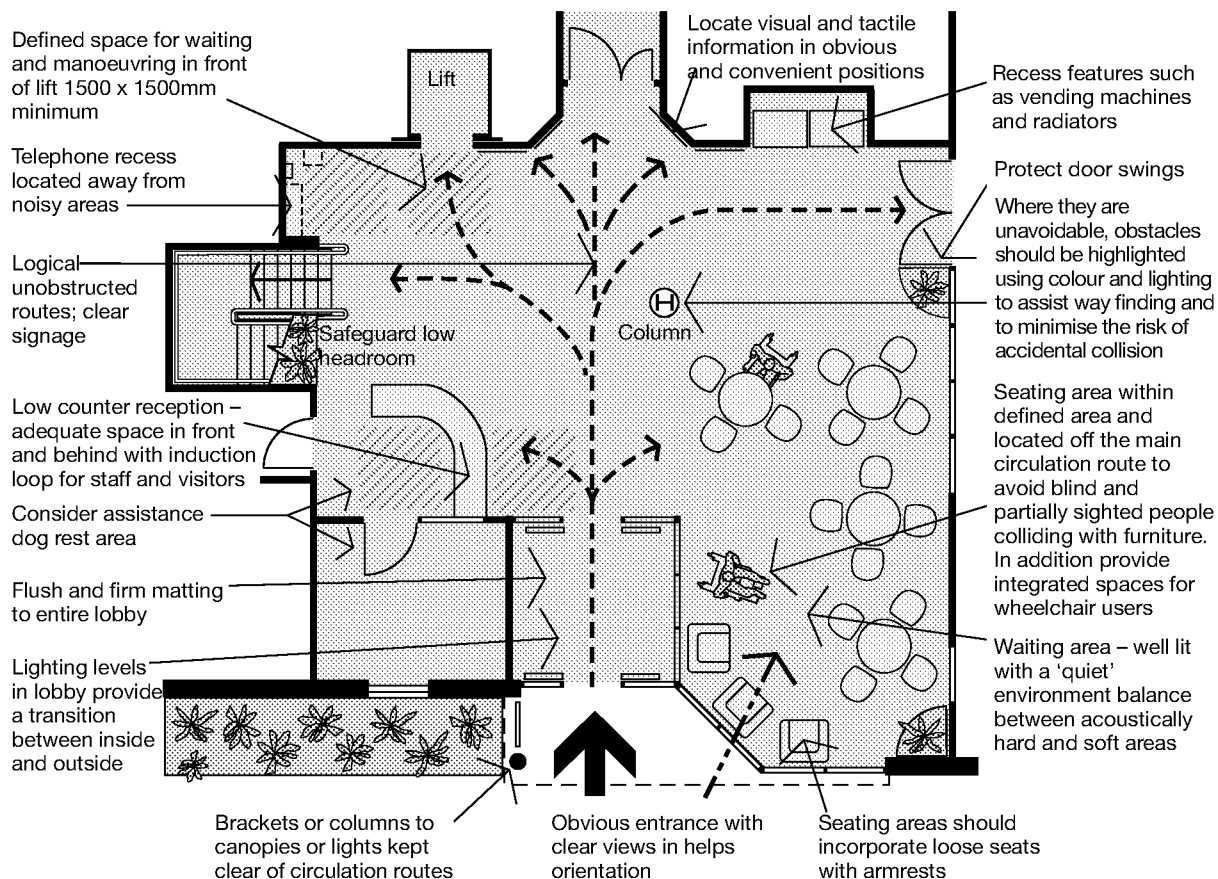


Figure 4 Reception Area

- Where space is necessarily limited, consideration should be given to omitting the inner doors, providing an effective overhead warm air curtain and adjusting the design of heating to the entrance area to minimise heat loss. The entrance should not face the prevailing winds in such circumstances in order to avoid unnecessary draughts.
- The level of lighting in the lobby should be adjustable to provide a smooth transition from external to internal lighting levels and vice versa.
- See BS8300 6.3.6 and Figure 8.

Foyer / Reception Area

The layout of the reception area should be clear and logical and minimise the need for signs to guide people through it. Close attention to detail is critical to the success of this space. See figure 4. The following should be considered:

- People coming through the entrance door should have a clear view of the reception desk. This includes considering the location of the desk and the use of colour and lighting to highlight its presence.

- People working in the reception area should have a clear view of the entrance.
- If turnstiles are provided ensure there is a pass gate to allow for people with pushchairs or wheelchairs. The gate should be electrically operated. If the turnstiles can be self operated via a membership card or similar, then any 'pass gate' should also be capable of being self operated.
- The lift, staircase and public telephone should be visible and close to the reception desk. Where a direct line of sight to these key facilities is not possible clear signage should indicate their whereabouts.
- Suitable seating is required for early arrivals and people who may be meeting friends before or after using the facilities.
- The acoustics within the reception area should promote clear speech intelligibility and particularly for interaction with staff at the reception desk which should be free from distractions. It is essential that hard reflecting surfaces, such as glass, be acoustically balanced with softer sound-absorbing surfaces, such as ceilings, carpets and curtains.

Reception desk

Where some form of reception/ booking desk is provided, it is essential that the desk or counter be properly designed to allow good access for all.

- The design of the counter should accommodate disabled members of staff behind the desk and disabled visitors in front of the desk. This includes considering the needs of wheelchair users, people of short stature and people who are deaf or hard of hearing.
- The desk should include a lowered section - see BS8300 Section 11.1
- The counter top and front should contrast visually in order to assist the location of the counter edge by blind and partially sighted people.
- Screens and grilles can inhibit communication and should only be used where essential for security considerations.
- An induction loop must be provided to assist users with hearing impairment and this must be clearly indicated using the standard symbol. Note: the induction loop should also be accessible from the lowered area of counter.

For some sports activities, for example swimming, it is not possible for the participants to take their assistance dogs with them. Where this may occur, a safe and secure rest space should be provided for the dogs; this could be within the reception area.

Public telephone

Except in the smallest facilities, such as small pavilions, a public telephone with an induction



The reception desk is designed for use from both sides by people using wheelchairs

coupler should be located in the reception area to allow people to call taxis, organise lifts, and so on.

Signs

Good, clear information is essential in all facilities:

- Only use signage to locate specific facilities and reinforce logical routes, confusing layouts should be avoided at the design stage.
- Large numbers of signs cannot necessarily overcome wayfinding problems created as a result of poor design of the facility. However, signage is essential in reinforcing wayfinding within well designed logical environments.
- The layout of the building and the use of appropriate floor and wall finishes and lighting can be used to convey navigational information.

Guidance for the design of signs can be found in Section 10.0 below and The Sign Design Guide.

(www.signdesignsociety.co.uk)

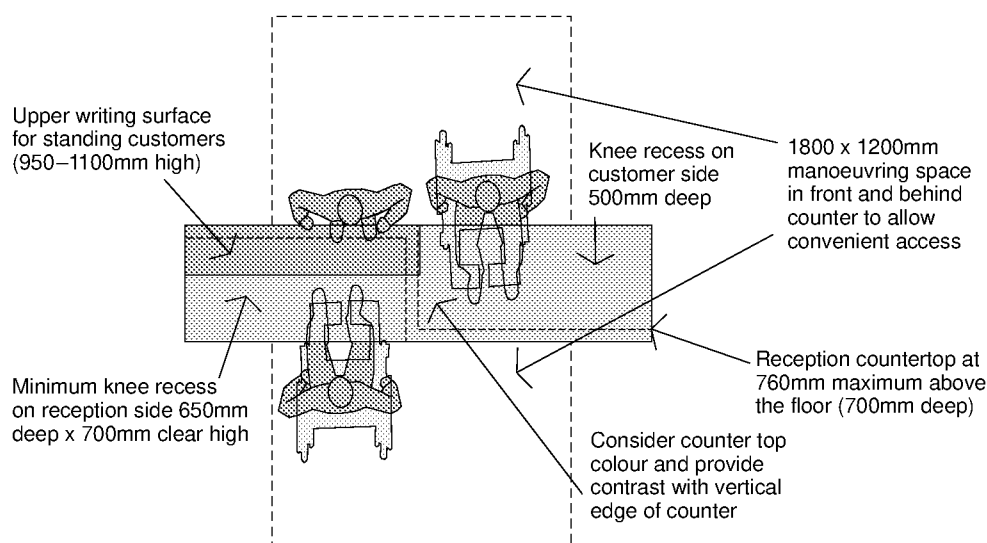


Figure 5 Reception Desk - key dimensions

5.0 Internal Circulation

Design the building to minimise the number of doors and the length of corridors that users have to negotiate. Consider carefully the location of internal columns and pillars; within the constraints of the design these should not be located in circulation areas where they may become obstructions. When this is not possible the obstruction needs to be 'highlighted' and protected by the use of appropriate details and decoration.

In facilities where sports chairs could potentially be used, the design of the internal circulation must take account of the requirements for a 'sports chair zone' - see page 9.

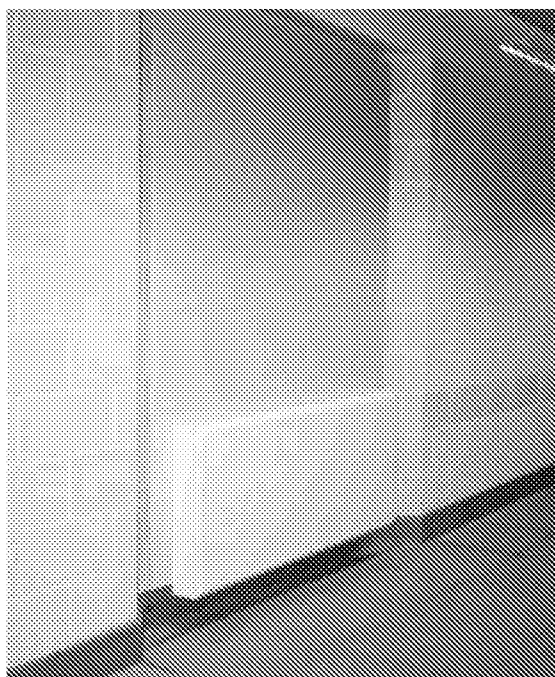
Corridors

See BS8300 and Approved Document M.

- As a minimum the unobstructed width of a corridor should be at least 1.5m. However, where the unobstructed width is less than 1.8m, it must have passing places at least 1.8m long and have an unobstructed width of at least 1.8m to allow wheelchair users to pass each other. If large numbers of wheelchair users are expected, the corridor width should be increased to at least 2.0m to allow wheelchair users to pass each other freely along main routes.
- In 'Sports Chair Zones' (see 'Accommodating sports chairs' on page 9), the unobstructed width of a corridor should preferably be 2.5m to allow users in large sports chairs to pass each other. However, the unobstructed width can be reduced to a minimum of 2.0m with the incorporation of passing places at least 2.5m long and with an unobstructed width of at least 2.5m - see fig 7. Passing places should be no more than 5m apart.
- Corridors should be wide enough to allow wheelchair users to approach and gain easy access through doors off the corridor.
- Corridors should be unobstructed; for instance, fire extinguishers, radiators, and so on should not project into the clear corridor width to ensure they do not present a hazard to children, wheelchair users or visually impaired people.
- Provide splayed or radius corners to walls at changes in direction or adjoining corridors wherever possible.
- Doors should be recessed when opening out into a corridor, to avoid a significant hazard.
- Avoid glazing at corridor ends.



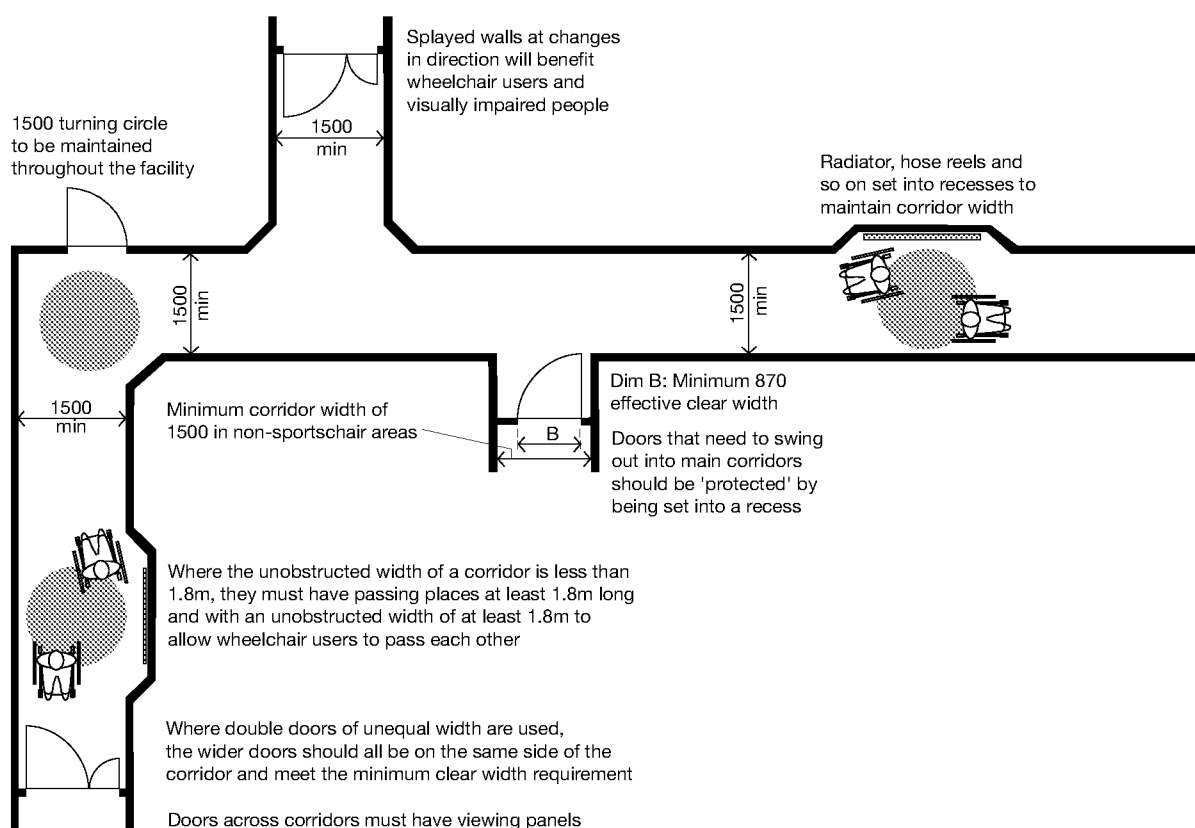
Whenever possible doors should be held open to minimise the number of barriers on a route way. Splayed walls at corridor junctions will benefit blind or partially sighted people and wheelchair users



Radiators and other hazards should not project into circulation areas

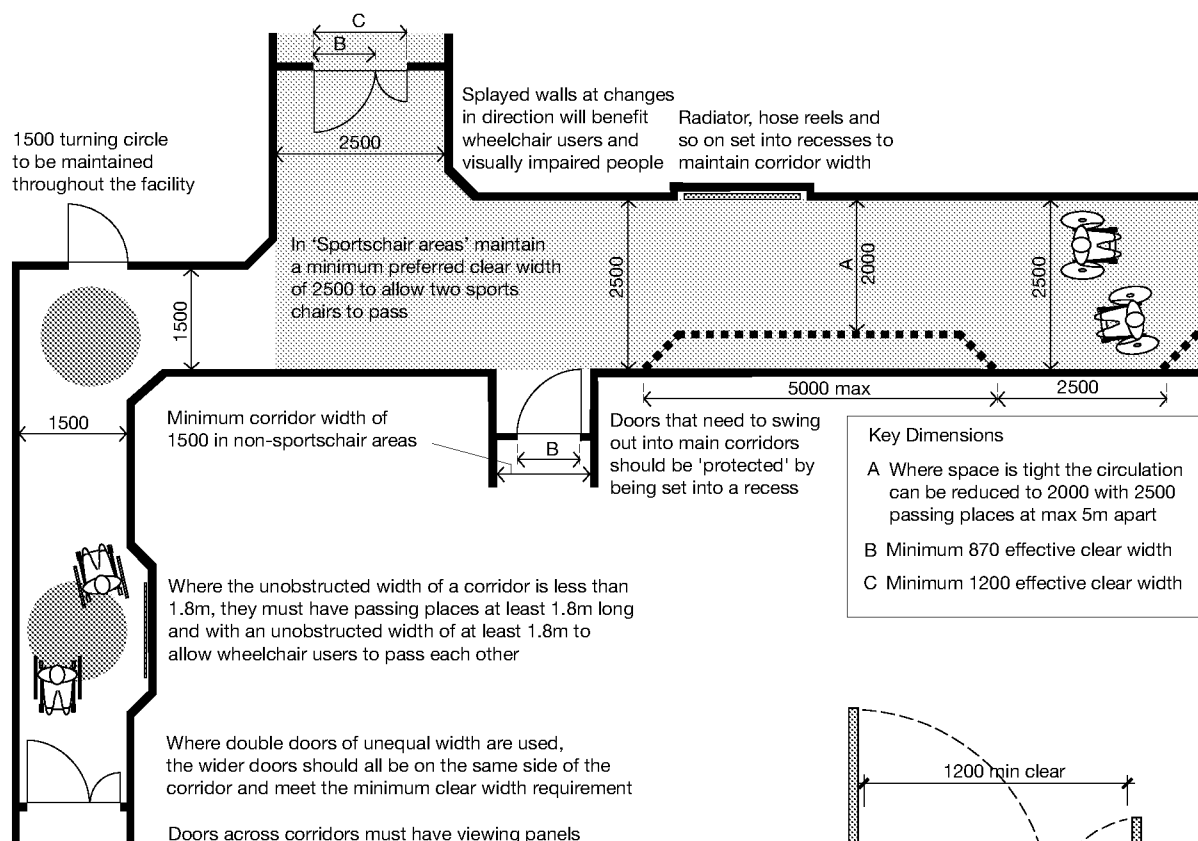


Where doors must swing out into a corridor they should be set in a recess



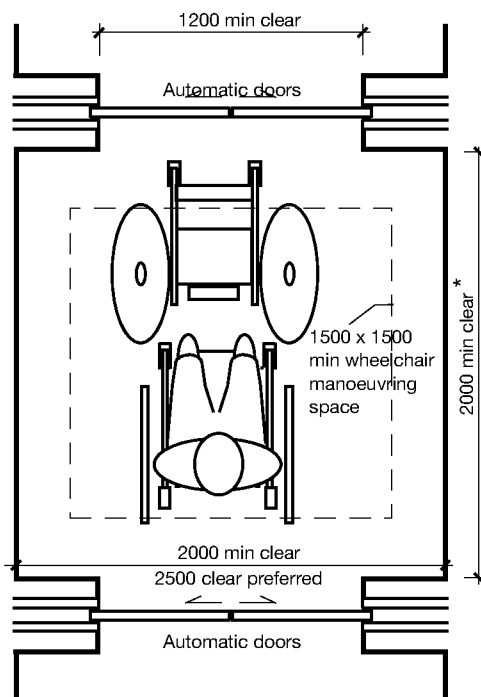
Note: All dimensions are in millimetres

Figure 6 Internal circulation for facilities WITHOUT 'Sports Chair Zones'.



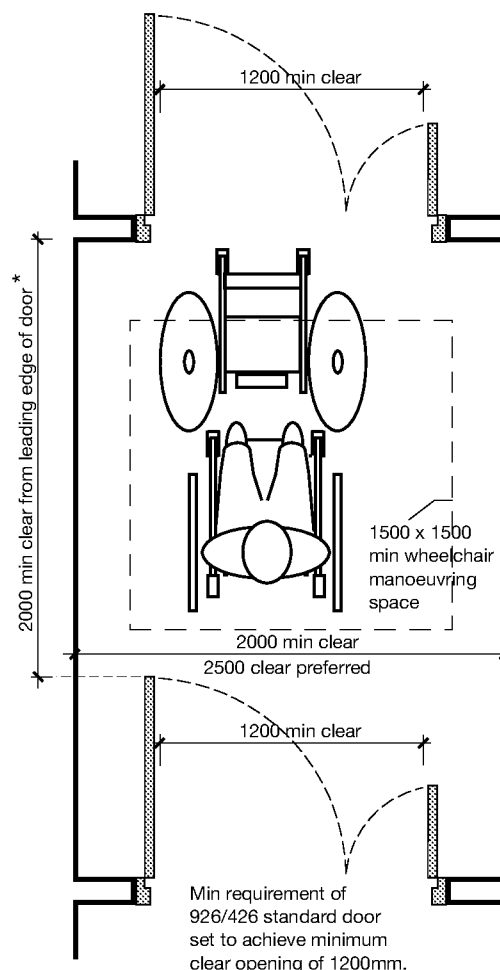
Note: All dimensions are in millimetres

Figure 7 Internal circulation for facilities WITH 'Sports Chair Zones'.



Note: lobbies for all other facilities in accordance with 'Approved Document M'

Figure 8 Entrance Lobby for sports halls and tennis centres with 'Sports Chair Zones'- minimum dimensions (mm)



Note: lobbies for all other facilities in accordance with 'Approved Document M'

Figure 9 Internal Lobby for sports halls and tennis centres with 'Sports Chair Zones'- minimum dimensions (mm)

Lobbies

- Minimise the number of internal lobbies as they can impact upon efficient use of the facilities. Where unavoidable internal lobbies should be of the appropriate size and layout

Ramps

See BS8300 and Approved Document M.

Avoid small changes in level within a storey whenever possible. However, where this is not practicable, all ramps and steps must be carefully designed. Where the complex is on two levels the following provision should be made:

- All ramps should have a minimum clear effective width of 1.5m except in the 'Sportschair Zone' of buildings such as Sports Centres and Tennis Centres where the clear effective width should be increased to 2.5m so that 2 large sports chairs can pass each other.
- Ramp gradients should be as shallow as possible. Where the gradient is less than 1 in 20 level landings/rest points should be provided every 0.5m rise.
- The maximum rise of any series of ramps should be 2.0m.
- In exceptional circumstances, short ramps with a maximum length of 2.0m between landings may be incorporated with a gradient no steeper than 1 in 12.
- Intermediate landings between ramps should be at least 1.5m long.
- Ramps should be surfaced with firmly fixed, slip-resistant and easy to maintain materials.

Stairs

See BS8300 and Approved Document M for more detailed advice.

- There should be a clear width of 1.1m except in small facilities where a minimum of 1m is acceptable.
- The maximum rise of each flight is 1.8m with risers no greater than 0.17m and treads no less than 0.25m.
- All steps, no matter how few, should be fitted with a suitable handrail on both sides (see later section).
- All landings must must be level and at least



Wherever possible, a ramped change in level should be accompanied by a short flight of steps suitable for ambulant disabled people who may find a ramped surface difficult to negotiate. The steeper and more extensive the ramp configuration, the more important it is to provide a short flight of steps.

1.2m long and clear of obstructions such as door swings. Intermediate landings should be a minimum of 1.2m wide and 1.5m long.

- All changes in level, including landings, are to be fitted with a continuous handrail.
- Tapered treads, spiral stairs and open risers present special hazards and should not be used.
- All stair nosings need to be clearly visible and made of contrasting slip-resistant material. The nosing should wrap around the riser so that it extends 55mm on the tread and 55mm down the riser.
- All staircases should be illuminated to at least 100 lux at tread level and be designed to ensure that people do not have to negotiate stairs in their own shadow.
- Avoid using glossy, polished materials that can cause glare or reflections that may impact on the safety of the stair.
- Ensure open areas under stairs are either free from head injury hazards likely to cause injury or are suitably guarded.

Handrails

See BS8300 and Approved Document M.

Handrails must be provided at all changes in level, however small, and give adequate grip and support. They should also take account of the following:

- Colour or brightness should contrast against the background so that they are easily distinguishable.
- Should have an outside diameter of 45–50mm for ease of grip.
- Should be continuous and fitted with ‘returned ends’ continued a minimum of 0.3m beyond the top or bottom of the ramp or staircase.
- Should not project into the minimum clear width of the stair, ramp or corridor.
- Should be robustly fixed.
- Balustrades should be designed to provide physical and visual security.

Doors

See BS8300 and Approved Document M.

Design

The number of doors in a building should be kept to a minimum, since doors obstruct movement through a building for many disabled people as well as people with large sports bags. Doors may be

heavy or awkward to operate if not properly designed and specified. Where they are unavoidable they should comply with the following guidance:

- All doors need to be designed to provide at least the minimum clear door opening appropriate to the type and scale of the facility ref Table 5 and Approved document M.
- Double doors must have at least one leaf that provides the minimum clear opening capable of allowing passage of a wheelchair without having to use the second leaf.
- Wherever possible, all doors should be single swing rather than a double swing action. Doors should not be provided with rebated meeting styles, which are more difficult to negotiate.

Location

- Locate all doors so that there is clear wall space of at least 0.3m to the leading edge side. Ideally – and for sport-specific situations – this should be increased to 0.5m.
- All doors should be designed and located so that they can swing to at least 90°, to ensure maximum door opening - see Fig 10.
- Doors should swing into rooms, not into corridors. Where unavoidable, doors swinging into a corridor should be fully recessed or protected by guardrails that lead people away from the door swing. Any guardrail must not restrict the minimum clear width of the corridor.

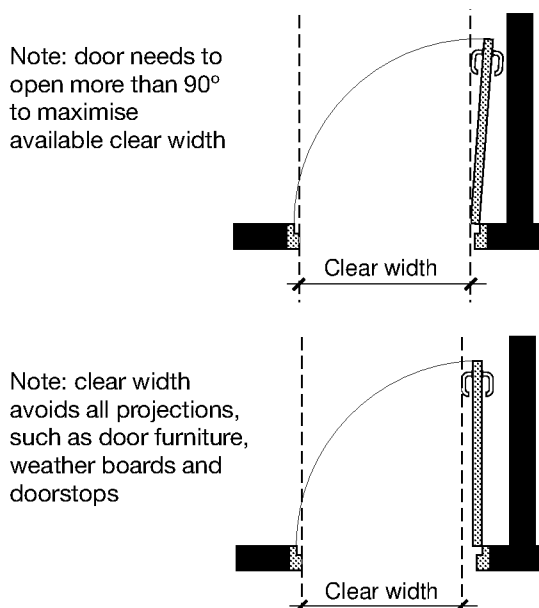


Figure 10 Doors – clear widths

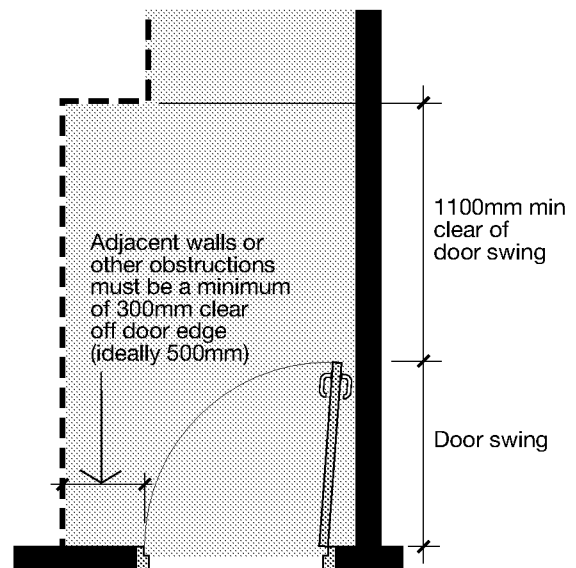


Figure 11 Doors – side clearances

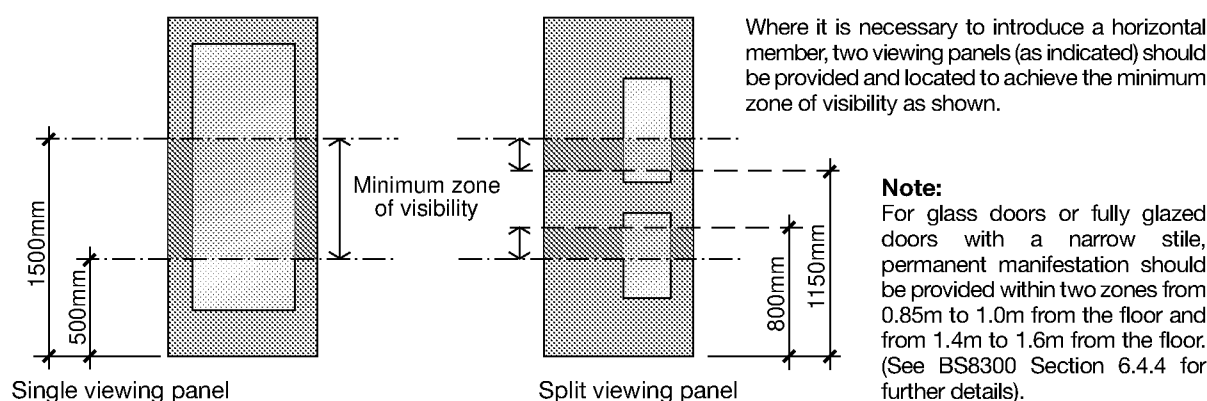


Figure 12 Doors – location of vision panels

Appearance

- Vision panels should be fitted to doors to minimise collisions. The vision panels should allow viewing of adults, children and wheelchair users on the other side of the door.
- Position vision panels as recommended in Approved Document M so that they accommodate people's eye levels when standing and sitting. See Fig 12 above.
- Fully glazed doors can be a hazard to blind and partially sighted people. Fully glazed doors should be clearly identified by contrasting bands of manifestation or colour logos. Equally, they should be clearly distinguishable from any adjacent glazing.
- It is important that visually impaired people can identify the door. The most effective way of achieving this is for the door colour to contrast with that of the wall.
- The leading edge of the door should be highlighted to contrast with the rest of the door so that it is more easily detected when the door is open.

Minimum clear width	Clubhouses/pavilions generally, except those serving tennis, athletics or outdoor basketball	Full-size synthetic pitch	Multi-use games area	Fitness equipment room	Four-court sports hall ^{1, 3}	Six-court sports hall ^{1, 3}	Nine-court sports hall or larger ^{1, 3}	Cricket indoor ¹	Gymnastics hall	Tennis indoor ¹	Tennis outdoor ¹	Basketball outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
875mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	
1200mm ²					●	●	●	●	○	●	●	○	○	○	○	●	●	○	○	●

Key: ● Required ○ Recommended

Notes

¹ For 4,6 and 9 court, cricket indoor, tennis indoor and tennis outdoor facilities the minimum clear effective width should be 1200mm in 'sports chair zones' and 875mm min for all other doors in the facility

² Unless the 1200mm width can be achieved with automatic powered sliding doors the effective clear width of 1200mm should be achieved by two doors so that when only one door is open a minimum clear effective width of 875mm is achieved.

³ Note where a sports hall is located above ground level the 'sports chair' zone will extend from ground floor level up to the floor level where the sports hall is located and therefore any lift doors etc will need to provide the 1200mm clear effective width

Table 5 Internal doors – requirements (except accessible toilets and changing rooms)

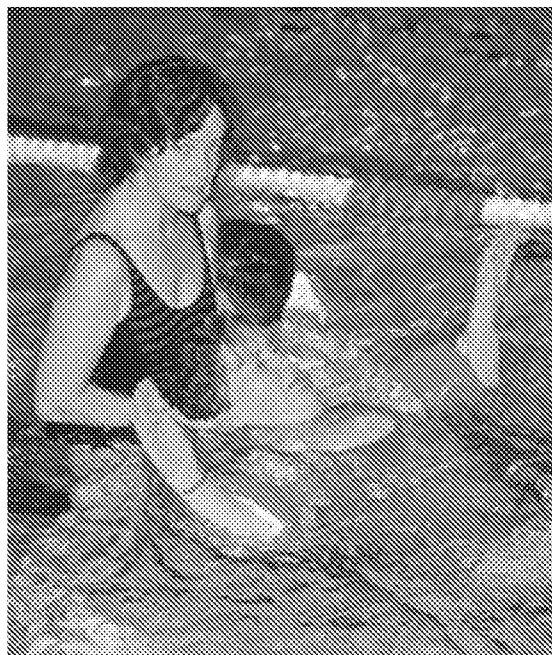
Door Closers

Doors can act as barriers if great force is required to overcome the door closer. The door closer should be set to the minimum force necessary to close the door - see BS8300 section 6.5.2.

- Specify and install door closers to minimise the effort needed to open the door.
- Do not set door closers at a high force level in order to overcome badly fitting hinges or smoke seals.
- Doors that are easy to open benefit everyone and are less likely to be damaged.
- Wherever possible, use electromagnetic catches linked to the fire alarm to hold the door open during normal use.
- In large facilities and in those where significant numbers of disabled users are anticipated, consider installing automatic internal doors, either linked to a sensor or to suitably located push pads.

Door Furniture

- Wherever possible doors should be fitted with ironmongery to facilitate use by push or pull operations.
- If it is necessary to install a door catch or lock rather than a latch mechanism to hold the door closed, use a lever handle. Doorknobs should be avoided as they are difficult to grasp.
- Door handles and pull handles should be located at a comfortable height for wheelchair and ambulant users as set out in BS8300.
- Door handles and pull handles should contrast with the door.
- Use escutcheons that contrast with the face of the door to aid location of keyholes.
- Provide a door pull on doors where no external handle is fitted so that it is not necessary to use the door key to pull open the door.
- Do not use 'break glass' emergency bolts as they are obstacles for people with disabilities. Large push pads, which can be alarmed if necessary, should be used to allow speedy departure from the building.



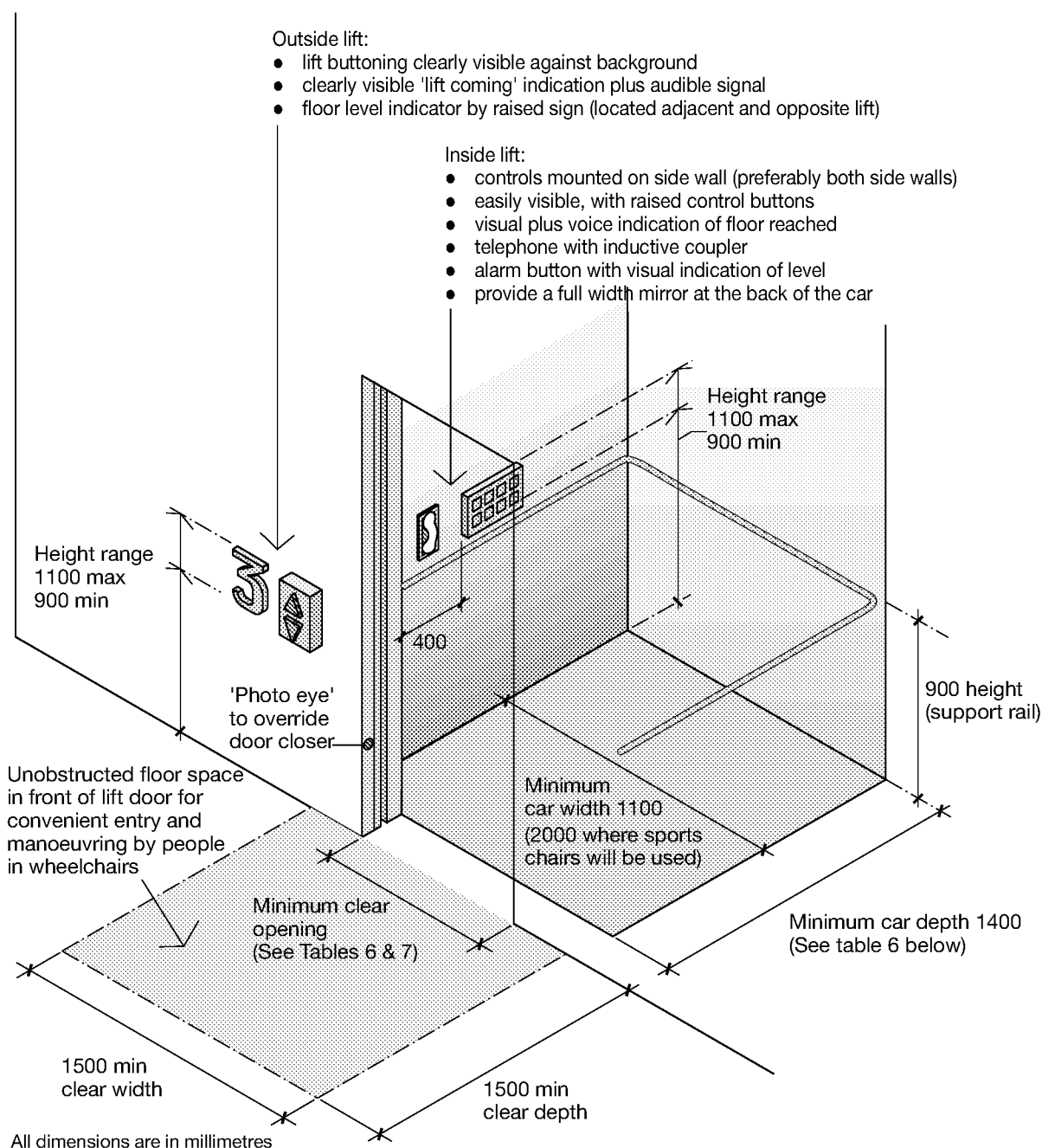
Lifts

See BS8300 and Approved Document M.

Passenger lift

A lift for general access should be located close to the reception and main circulation routes. The lift specification is as follows:

- The lift must conform to the requirements of BS EN 81-1, BS EN 81-2 and BS EN 81-70
- In all but the smallest multi-storey facilities, at least 2 general access lifts should be provided to ensure that users are not inconvenienced / stopped from using the facility if one lift breaks down or is being serviced.
- The lift door must have a clear opening width appropriate to the size and scale of the facility and the type of wheelchairs to be used (See Table 7).
- For sports facilities that will not include wheelchair sports, the internal lift space must be at least 1.1m wide x 1.4m clear depth internally and preferably 2.0m wide and 1.4m deep.
- Where the lift is part of the 'sports chair zone' the lift door will need to provide a clear opening of 1.2m to accommodate the large sports chairs.



Notes:

- Lift doors should remain open for five seconds to allow adequate time for entry.
- Lift doors must be easily distinguishable from the adjoining wall.
- Consider fold-down seats in larger lifts.

Figure 13 Lift – Critical Details

Passenger Lift capacity	Load Kg	Car Width mm	Car length mm	Door Width mm (clear)
8 ¹	630	1100	1400	900
17 ²	1275	2000	1400	1100 ²

Notes:
Through lifts (lifts with doors at both ends of the lift car) are available from most passenger lift manufacturers. These allow wheelchair users to enter and leave without reversing, but will impact upon the building layout. In all but the smallest multi-storey sports halls, at least 2 general access lifts should be provided.

¹ An 8 person passenger lift is the smallest size that will meet the requirements for an accessible lift, but can only carry one wheelchair at a time.

² Where the lift is part of the 'sports chair zone' (see Figure 7), the lift door will need to provide a clear opening of 1200 to accommodate the large sports chair and an appropriate increase in car size.

Table 6 Accessible Passenger Lift Car & Door Sizes - Minimum Requirements

- If the minimum car size is used, consideration should be given to a through car where it is possible to enter and exit in a forward direction.
- Otherwise, a mirror should be provided on the back wall of the lift to assist the wheelchair user who has to reverse out of the lift.
- For sports facilities where there will be wheelchair sports lift, the lift size should be 2.0m wide and 1.4m deep to accommodate at least two wheelchairs at a time.
- Within the car and at each landing there should be audible announcements and a clear visual display of the level reached.
- The lift controls should be clearly distinguishable, easy to operate and be within reach of wheelchair users. The buttons should have tactile numerals and symbols.
- Within the car the controls should be located on a side wall.
- Light fittings within the lift car should be located so that they do not cause glare; there should be a minimum light level of 100 LUX at floor level.
- Accurate levelling at landings is critical. This is dependent on regular maintenance.
- There should be a minimum five-second delay to the lift door closing mechanism.
- Consider providing a fold-down seat in larger lifts.
- An alarm button should be provided, with a repeater light to show that the alarm bell has sounded. An additional button that can be reached from floor level should be provided.
- The emergency communication system in the lift should incorporate inductive couplers to assist hearing aid users.
- In association with the fire officer and/or building control officer, agree whether the lift is to be designed and designated for use for emergency purposes (See Section 6.0 and BS 9999:2008).
- Where lifts are located in separate fire compartments, they may, subject to agreement with the Fire Officer and risk assessment, be used for emergency evacuation (See Section 6.0 and BS 9999:2008).

At each floor level:

- There should be clear space of at least 1.5 x 1.5m in front of the lift.
- Opposite and adjacent to the lift there should be clearly visible signs with raised numerals/ letters indicating the floor level.

Minimum clear door width into lift (mm)	Clubhouses/pavilions (serving only natural turf pitches)	Clubhouses/pavilions generally	Full-size synthetic pitch	Multi-use games area	Fitness equipment room	Four-court sports hall **	Six-court sports hall **	Nine-court sports hall or larger **	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
900 *	●	●	●	●	●	●	●			●			●	●	●	●	●	●	●	●
1100 *						○	○	●	●		●	●				○				○
Short-rise vertical platform lift	▽	▽	▽	▽	▽					▽		▽		▽	▽			▽		
Key: ● Required ○ Recommended ▽ May be acceptable																				
* Where the lift is providing access between 'Sportchair Zones' the lift should have an effective clear opening width of 1200mm																				
** Note where a sports hall is located above ground level the 'sports chair' zone will extend from ground floor level up to the floor level where the sports hall is located and therefore any lift doors etc will need to provide the 1200mm clear effective width.																				

Table 7 Lifts – minimum clear door width requirements

Vertical platform

In exceptional circumstances where a passenger lift cannot be accommodated and there is limited wheelchair use, short-rise vertical platform lifts are acceptable in small facilities. These lifts can be particularly useful in existing buildings where a significant change in level would necessitate an extensive ramp arrangement or where space is limited. Note the following details:

- Enclosed platform lifts should conform to ISO 9386-1
- Non-enclosed platform lifts should conform to BS 6440
- Minimum clear platform size must be 1.1m wide x 1.4m long
- Platform lifts have limited platform size and can only accommodate one wheelchair at a time. They are not suitable for sports facilities catering for large numbers of wheelchair users.

Wheelchair stair lift

A wheelchair stair lift is not an acceptable means of access for any type of sports facility and could be a hazard if fitted on escape stairs.



6.0 Emergency Escape

Detailed guidance on means of escape for disabled people is given in BS 9999:2008 Code of Practice for fire safety in the design, management and use of buildings, Section 9 part 46 Evacuation of disabled people. The main requirements for a sports facility are set out below.

Planning

Give detailed consideration to how disabled people will be evacuated from the building at an early stage of the project. Their safe and successful evacuation is dependent upon:

- Management arrangements
- Layout, in particular the 'sports chair zone' where users could be using large sports chairs
- Construction of the building.

These three issues cannot be dealt with in isolation even in the smallest facilities. Early consultation should take place, initially between the architect and the building manager, to establish:

- The physical features that can be used to support means of escape of disabled people
- The numbers of staff that might be available to provide assistance
- The communication systems that can be put in place to ensure that this information is conveyed to all disabled people using the building.

Using this information an outline fire plan evacuation strategy should be developed. In all but the smallest projects the architect should then consult with the building control officer and the fire officer to obtain advice and guidance on the proposed building and evacuation strategy. In larger projects a fire consultant may be required in order to prepare a Fire Engineered solution.



Disabled people

It is not possible to accurately determine the numbers of disabled people that will use the building; however it is likely that they will include the following:

- Mobility-impaired people
- Wheelchair users
- People who are deaf and hard of hearing
- Blind and partially sighted people
- People with cognitive disabilities
- People with unseen health disabilities such as asthma.

Each of these groups of people may require either:

- suitable physical features to enable them to exit independently
- assisted evacuation.

The number of disabled people will however depend upon the type of facility proposed. Facilities designed to cater for training for events such as the Paralympics will inevitably attract a high number of disabled people, not just as competitors but also as spectators.

Early in the design process it is important to recognise the cost of providing staff to assist escape rather than taking inclusive design features into the escape routes.

Multi-storey buildings

In a multi-storey building great care should be taken to ensure that management of the facility takes account of disabled people's requirements – especially with regard to emergency evacuation.

A sports facility must be accessible to everyone. Evacuation procedures need to allow everyone to make their way to a place of relative safety protected from fire and smoke whatever floor they are on.

The place of safety should be considered as the first part of their escape and an opportunity to buy time for them to exit the building safely.

With the right physical features, many disabled people, including wheelchair users, will be able to get out of the building under their own steam. Sometimes however this may be slower than the majority of the people in the building. It is important therefore that they are able to use the safest

escape route to make their descent; the opportunity to do this will need to be facilitated by good communication and information regarding the nature, extent and position of the emergency.

In the event of a false alarm, it is important that disabled people leaving the building are advised of this as soon as possible so that they can stop their descent and wait for further instruction.

Where assisted escape is the only option for a person then this should be provided through the management of the building. It should not be left to the fire service to provide assisted escape and their duties when attending the fire will be:

- life safety
- immediate fire control
- rescuing people who are not at immediate risk.

Fire evacuation

An Evacuation strategy must be based on a risk assessment and must ensure that:

- Every part of the building has a safe means of escape in emergencies.
- Every escape route is fully usable by everyone, including people with disabilities wherever practicable.

Evacuation plans

Evacuation plans need to define comprehensive management procedures for the evacuation of all occupants including disabled people:

- Establish procedures to ensure people are aware of where assistance can be obtained if needed.
- All fire exits on the ground floor should have level or ramped access.
- Where there is spectator seating the design should provide a means of escape for disabled spectators.
- The number of disabled people using a sports facility may vary significantly according to the nature of the use, ranging from an individual user to large numbers of participants, spectators and officials at large competitions. The evacuation plan should anticipate these situations and ensure the adequacy of the building design and of management procedures.

The use of personal emergency evacuation plans (PEEPs) is recommended for all people requiring

assistance to leave the building. Details of three types of PEEP are given in clause 46.7 of BS 9999:2008 Section 9.

Refuges

The design should incorporate 'refuges' on escape routes serving for example flights of stairs or an evacuation lift. Refuges are places of relative safety where disabled people can wait for short periods of time before making their way to the final exit or await assistance to the final exit.

If possible, the fire compartmentation of the building should be used to provide a means of horizontal evacuation to a place of safety. Ideally, each fire compartment should be served by its own lift so that a full evacuation can be achieved.

Where progressive horizontal escape is provided it is important that the building orientation system reflects this. See Annex G of BS 9999:2008.

Existing buildings may have spaces that can be used as refuges without the need to create new areas.

The minimum size for a refuge is 0.9m x 1.4m except in facilities such as sports halls that are likely to accommodate sports chairs. In such cases the minimum size is 1.2m x 1.5m.

A refuge of suitable size should be provided at each floor level for every fire escape staircase. The refuge area must not restrict the escape width.

In large, complex sports facilities it is essential that the responsible person/fire officer can communicate with people occupying refuge areas. The specification of a suitable intercom system should comply with BS5839:2003 and be agreed with the fire officer at an early stage in the project's development. Where a refuge is located in a lobby or stairway a 'Refuge – Keep Clear' sign should be displayed.

Evacuation lift

To operate in the event of fire, an evacuation lift should:

- Be a passenger lift that is always available for evacuation purposes.
- Be designed in accordance with BS 8300, BS EN 81-1 or BS EN 81-2 and BS EN 81-70 and BS9999:2008.
- Have its own independent electrical supply and control.
- Be clearly signed.
- Be located so as to be associated with a refuge and escape stair.
- Be within a protected enclosure, that is, the lift shaft itself and have protected lobbies at each floor level and a direct route to the outside at the exit level.

In a building over two storeys, install a communications system to relay information to the person operating the lift car.

Note that a goods lift should not be used for people movement under any circumstances.

Where a lift of any kind is provided in a compartment not effected by the emergency then it may be possible to use this if a suitable Risk Assessment is provided.

Sounders / alarms

In large facilities supplement audible alarms with approved flashing beacons for people with a hearing impairment. The beacons should be located in areas where people with a hearing impairment might find themselves alone and unaware of an emergency evacuation alarm. Flashing beacons must be located so that they are within the line of sight.

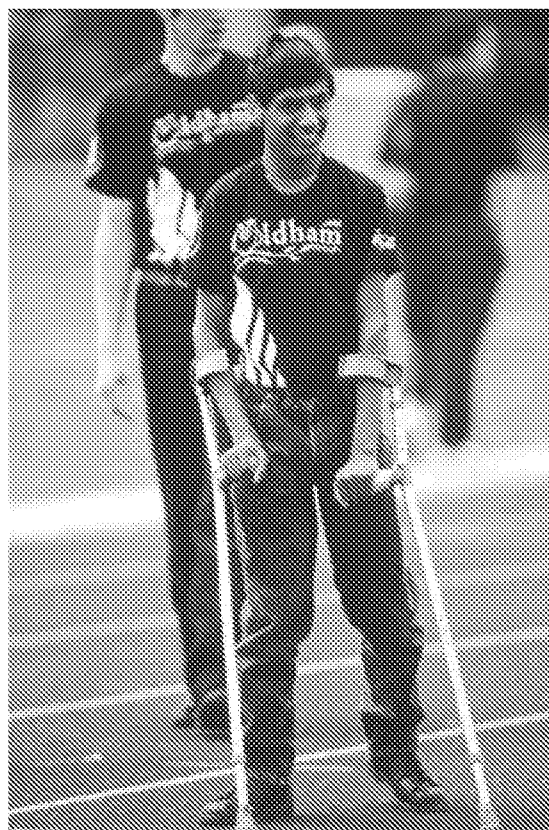
It is important that all members of staff are properly trained so that they take appropriate steps when a person does not react as expected by using suitable communication techniques.

In smaller facilities consideration should be given to providing personal vibrating pagers linked to the alarm system. Vibrating pager systems are particularly useful for deaf staff, who may work on their own anywhere within a sports complex.

Where digital visual information display systems are provided these can be connected to the alarm systems and display information including evacuation alerts. Where assistive hearing systems

are provided these can also be programmed to transmit means of escape information.

In larger facilities, two-stage alarm systems may be utilised. The first stage being a staff 'Alert' enables them to put into action the planned response. This could be the evacuation of the area in immediate danger, ensure that people unable to leave the building unaided are assisted to refuge areas etc. The second alarm would signal the full evacuation of the building.



7.0 Changing Areas

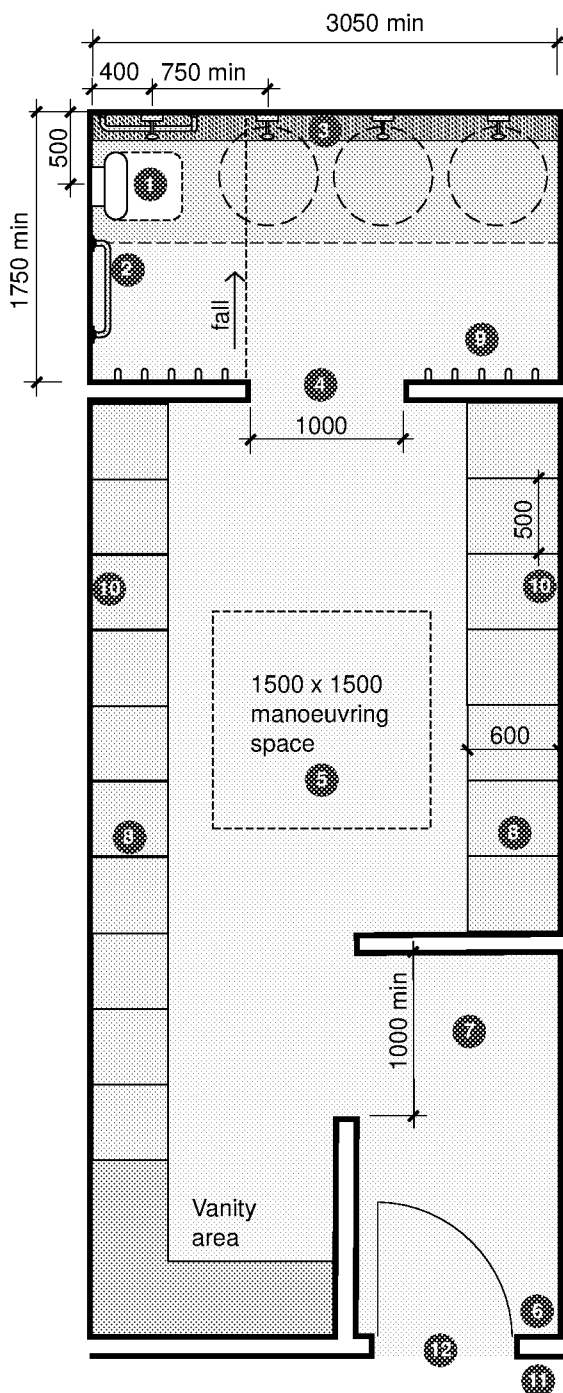
All changing areas must be designed so that disabled people can use them. This does not necessitate expensive design features but it does require attention to detail and layout. All sports facilities, except those serving only grass pitches, must provide at least one individual unisex

accessible changing room complete with shower and toilet. This enables assistance to be given by someone of either sex.

Key design requirements are set out below. For sport-specific requirements see the later sections.

Note:

It is intended that CAD drawings of figures 16-20 and figures 22-25 are going to be made available for download from the Sport England website.



Key

1. Robust 500 x 500mm shower drop-down seat with horizontal and vertical grabrails to give extra support to users
2. Horizontal grabrail in drying area gives extra support and can be used as a towel rail
3. Simple, safe falls to drainage channel
4. Level threshold between changing and shower areas
5. 1500mm minimum manoeuvring space to be maintained in the changing area in front of benches and fittings
6. Minimum 300mm clear (500 preferred) from door leading edge to wall
7. Entrance lobby provides privacy by screening the changing area but maintains the minimum clear width of 1000mm
8. Benches 450mm minimum depth (500 preferred) set at height 480mm with a smooth finish to surfaces and edges. Also provide run of 600mm deep benches to some areas
9. Towel hooks in shower located at 1400mm
10. Locate coat hooks above benches at 1400 and 1050mm
11. Locate signs on wall adjacent to door edge to allow easy identification of the changing facilities
12. 1026mm door to achieve minimum clearance requirement of 875mm

Note: All dimensions are in millimetres

Figure 14 Accessible Team Changing Facilities

Main changing areas

Layout

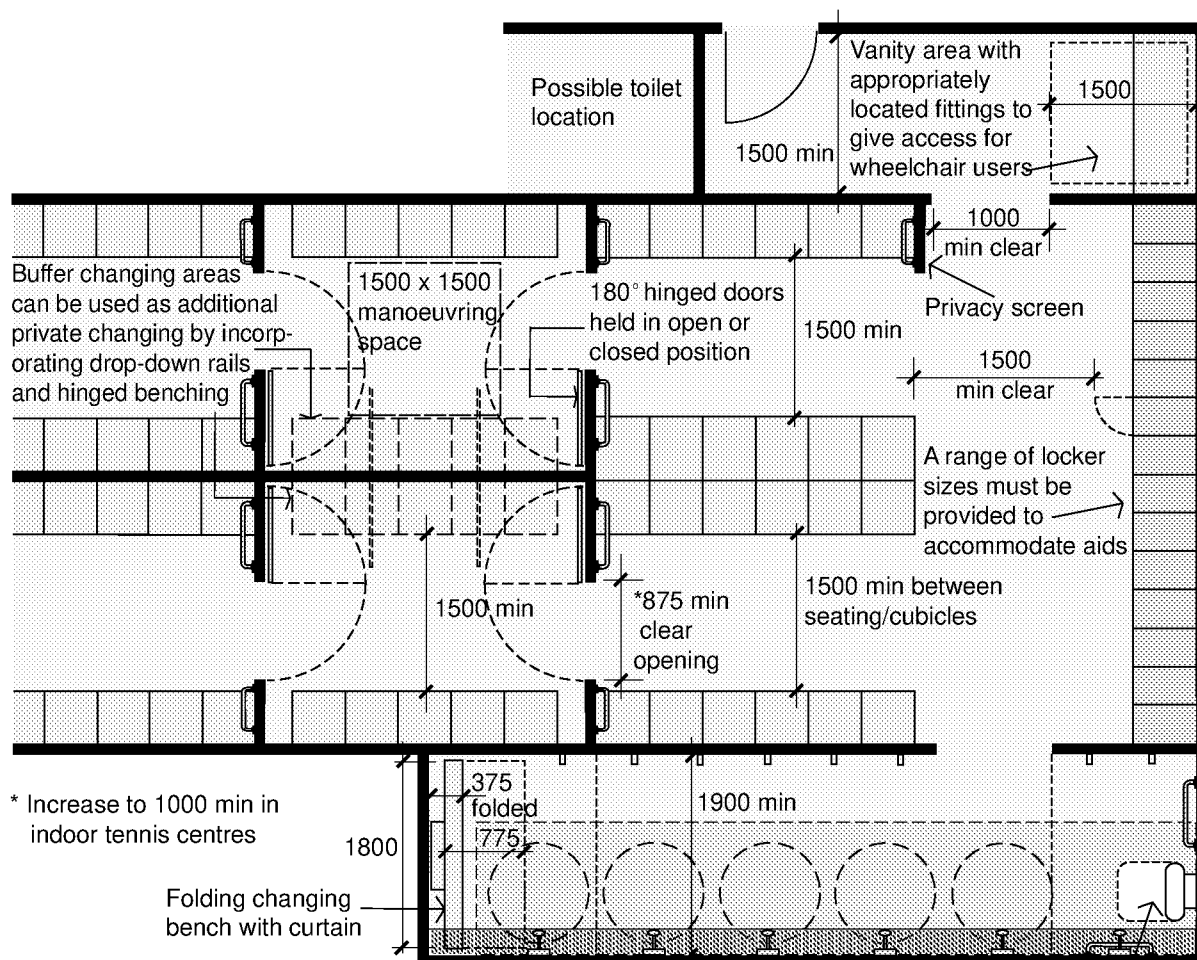
A well-designed layout is critical to achieving maximum accessibility. Careless design can reduce a person's independence and, at worst, physically prevent use of a facility. It is essential that:

- Sufficient space is provided for wheelchair users to manoeuvre.
- Allowance is made for a wheelchair user to change without obstructing other users.
- Direct access is provided to the shower area from the changing room.
- Toilet provision is in very close proximity to the changing area.

Some disabled users may prefer the privacy of an individual cubicle and, wherever possible, these should be provided.

Where significant wheelchair use is anticipated, for example where wheelchair team sports could be played, the layout and design of the changing area should reflect this. This may include:

- An individual accessible changing cubicle or cubicles within the main 'team' changing area, which can double up as family changing to allow personal privacy within the team context.
- Where appropriate these individual accessible cubicles should be fitted with support facilities such as hoists and additional handrails.



Note: All dimensions are in millimetres

Figure 15 Accessible Group Changing Facilities

Benches

- All benches must have a minimum depth of 0.45 – preferably 0.5m – and be set at a height of 0.45m to allow easy transfer from a wheelchair.
- For assisted changing for an adult, a length of bench at least 0.6m deep by 2.0m long should be provided within the main changing areas.
- Additional non-toxic foam matting may be necessary to lay over the benching as extra protection for people with sensitive skin. The matting should be kept readily available in a convenient store.
- Where wheelchair competition events are likely but infrequent, consider making some benching movable to provide temporary additional manoeuvring space for extra wheelchair users.
- Sports facilities commonly incorporate ‘buffer’ changing spaces to accommodate peak demand on changing provision. When not required for general changing, well designed buffer spaces can provide additional private changing for disabled users.

Coat hooks

- Alternate coat hooks should be located 1.05m and 1.4m above floor level to enable use by children and wheelchair users.

Lockers

- Sufficient lockers should be set at heights between 0.45m and 0.9m and be at least 0.3m wide. A proportion of lockers should be 0.4m wide to accommodate sports bags.
- Ten per cent of lockers should be ‘full-height’ lockers at least 1.8m high to accommodate mobility aids and so on.
- Locks must be positioned at 1.15m maximum above the floor and be easy to operate by a person with poor dexterity or limited hand or arm strength. Where stacked locker compartments are used, locks to the upper cubicles need not be limited to 1.15m provided that there are sufficient numbers of lockers accessible to disabled users within the locker runs.
- Locks and lockers should have clearly visible and embossed numbers that can be read by sight or touch.
- Where there are large banks of lockers some form of orientation assistance should be given, for example by using very strong colour

contrasts and/or symbols and by replicating this as part of the key design, for example, by zoning areas with the use of colour.

Equipment

Shower wheelchairs

- Self propelled shower wheelchairs should be readily available. These are essential for use in showers and other wet areas and to provide access to the swimming pool.
- In facilities where there is a hoist assisted large changing room and several shower wheelchairs are provided, one should be of the commode type for use with a WC.
- There should be enough floor space to enable the users to transfer from their own wheelchair onto the shower chair.
- A suitably designed space should be provided within all changing areas for the safe, convenient and secure storage of shower chairs and personal wheelchairs.

Hoists

For a large number of people, transfer to and from their wheelchair can only be achieved with the aid of a hoist in the changing room environment.

Two types of hoist are available, ceiling track hoists and mobile hoists. Where installation is possible, a ceiling track hoist should be provided in preference to a mobile hoist as it is easier to use. Also it cannot be removed from the room in which it is needed.

• Ceiling track hoists:

Ceiling hoists run along permanently fixed tracks, so they offer less flexibility in use than a mobile system. However, they do not occupy floor space as does a mobile hoist. They are also easier to use.

The flexibility of the ceiling hoist can be increased by the use of an ‘H’ track that gives access in the hoist to a larger area of the room.

• Mobile hoists:

Mobile hoists do not require any track installation; they are more flexible in use. However, they are more difficult for the personal assistant to use. They should not be used for moving people long distances. A mobile hoist will also require appropriate storage when not in use.

It is also important to check that the hoist has sufficient capacity to lift the heaviest people using the facility, and an operating range to lift the person clear of any surface, and perhaps also to pick them up from floor level in an emergency, although this should be left to a medically qualified person.

A mobile hoist should be available as indicated in Table 11 on page 61.

- **Slings:**

Both types of hoist require a sling in which to carry the person being transferred. A person who relies on the use of a hoist for transfer may well have their own sling; however, this may not be compatible with the hoist available.

Whilst people should be encouraged to bring their own slings, a range of slings should be available within the facility to cope with people of different sizes and weights. They should be securely stored when not in use. In order to limit risk of infection, slings must be kept clean and washed after each use.

Hairdryers/mirrors

- Hairdryers and mirrors should be provided above shelves in the vanity areas of changing areas. For universal use, the hairdryer controls should be set at 1.1m maximum above floor level.
- Mirrors over shelves in grooming areas should be 1.0m high by 0.5m wide and positioned so that the top is 1.9m above the floor level.

Heating

To avoid accidental burns heating surfaces should be carefully located and fitted with thermostatic controls. Radiators and radiant tubes, for example, should be low surface temperature type, fitted with cover or positioned out of reach (e.g. ceiling panels).

Unisex accessible changing

Provision

The minimum provision for accessible changing is indicated in Table 8, however consideration should be given to the provision of additional spaces to meet likely demand. Generally, unisex accessible changing facilities should be provided in addition to other accessible provision.

- Dedicated accessible changing areas allow a helper from either sex to provide assistance in privacy.
- Each room needs to contain a tip-up seat,

shower, WC and washbasin and meet the dimensional criteria set out in Figure 16.

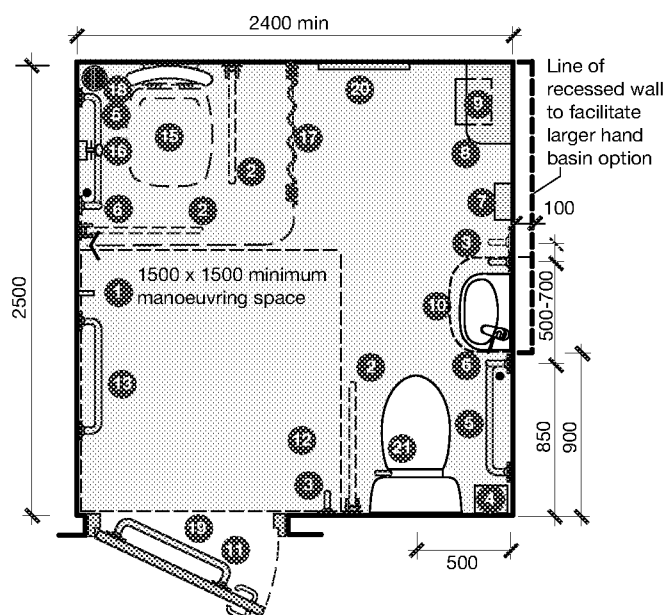
- Unisex accessible changing rooms should be clearly signposted.
- Layout and relationships to other areas are critical.
- Dedicated lockers should be located immediately outside the accessible changing to allow access by more than one person and avoid the risk of vandalism.
- The number of accessible changing rooms provided will depend on the type and scale of the facility (see Table 8).
- The design and quality of the accessible changing area should be similar to the other changing facilities; fittings should contrast clearly with their background.

Larger unisex accessible changing cubicle

- For sports facilities where there is likely to be a demand from more severely disabled people, an additional larger, unisex changing cubicle with WC, basin shower, changing bench and ceiling hoist should be provided.
- Recommendations for the provision of larger changing cubicles are made in Table 8.
- The criteria for dimensions and equipment of the larger cubicle is shown in Figure 19.
- Where more than one larger changing cubicle is provided it may be appropriate to use a mobile, height adjustable changing bench rather than a stationary bench.

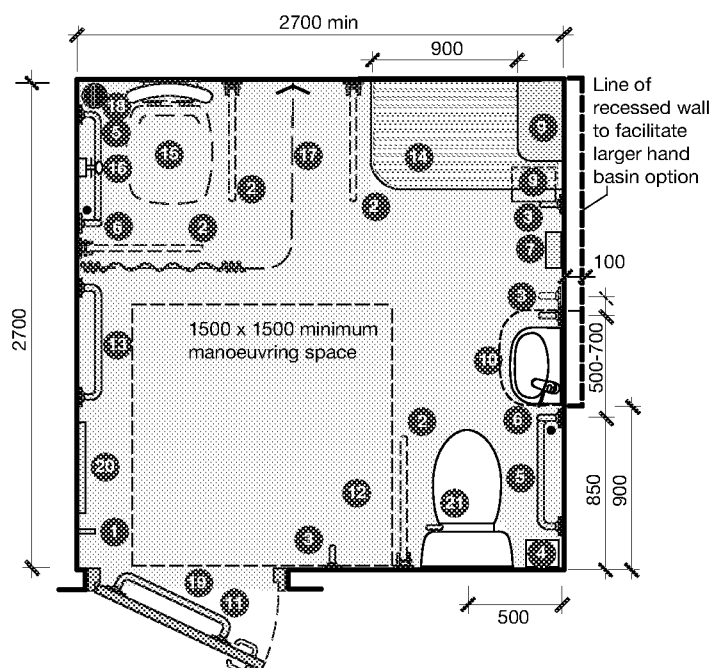
Showers

- All shower areas must be usable by everyone. An area designed to meet the needs of disabled users will accommodate use by non-disabled people.
- Except in small pavilions serving only one natural grass pitch, all shower areas should be fitted with at least one drop-down seat and appropriate grab rails. The seat should fold up out of the way when not required.
- Shower seats should not be fitted with vertical support struts as these impede access.
- At large facilities, in addition to providing the fixed tip-up shower seat a mobile shower chair should be provided and an area provided where the chair can be safely and conveniently stored.



Note: All dimensions are in millimetres

Figure 16 Unisex Accessible Changing Room



Note: All dimensions are in millimetres

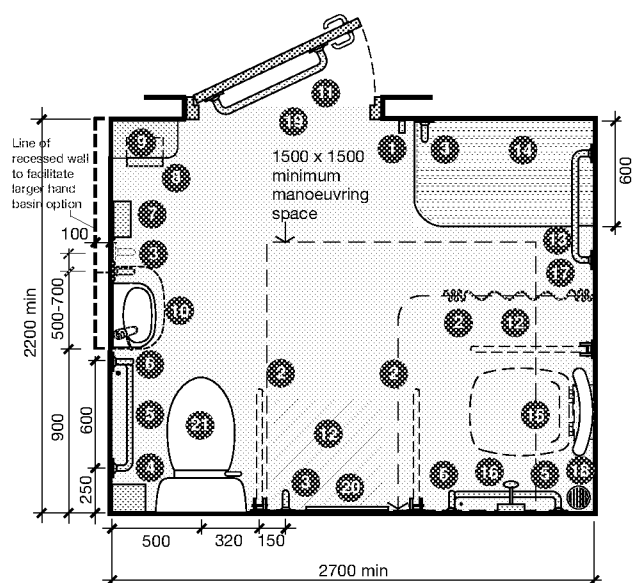
Figure 17 Unisex accessible changing room with fixed changing bench seat

If two changing rooms of these types are to be provided they should be mirrored to allow for left hand and right hand transfer

Refer to Figure's 18 & 26 for key setting-out dimensions for WC and basin and Figure 21 for shower wall elevation

Key

1. Two clothes hooks set at 1400mm and 1050mm above floor level
2. Drop-down rail (without toilet roll holder)
3. Fixed vertical rail
4. Colostomy changing shelf for ambulant users 950mm above floor level
5. Fixed horizontal grabrail
6. Fixed vertical rail and adjacent alarm pull-chord with two red triangles
7. Automatic hand dryer
8. Low shelf with rounded corner
9. Disposal bin for miscellaneous items with sanitary dispenser above (750-1000mm above floor level)
10. Hand basin can be recessed in order for a larger basin to be used (as an alternative to a standard small basin)
The thermostatic mixer tap to be located on the WC side of the basin.
11. Horizontal door pull to enable door to be closed when entering
12. It is essential to keep the area adjacent to the WC clear to allow side transfer onto the WC
13. Fixed horizontal grabrail used as towel rail
14. 600mm deep fixed seat bench with rounded corner and soft round edges
15. Padded tip-up shower seat with back rest. Front edge set 600-700mm from back wall to allow lateral transfer
16. Shower controls - lever-operated, thermostatically controlled (max 41 degrees centigrade)
17. Shower curtain and rail
18. Floors laid with simple falls to flush gully or grating
19. 1026mm door to achieve minimum clearance requirement of 875mm
20. Mirror 1500mm high, located 600mm above floor level
21. WC: flush lever to wheelchair transfer side; transferring from a wheelchair to a WC imposes significant forces, therefore all fittings must be robust. Wing nut fixings should not be used to secure the toilet seat.



Note: All dimensions are in millimetres

Figure 18 Unisex accessible changing room with shower, WC and fixed bench seat

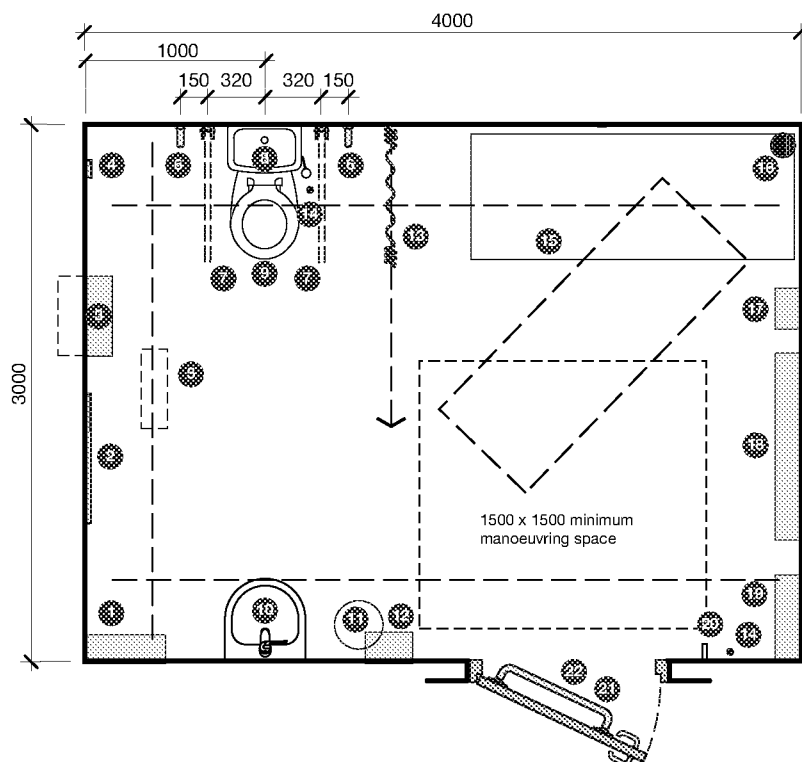
Notes:

If two changing rooms of these types are to be provided they should be mirrored to allow for left hand and right hand transfer

Refer to Figure's 26 for key vertical setting-out dimensions for WC and basin and Figure 21 for shower wall elevation

Key

1. Two clothes hooks set at 1400mm and 1050mm above floor level
2. Drop-down rail (without toilet roll holder)
3. Fixed vertical rail
4. Colostomy changing shelf for ambulant users 950mm above floor level
5. Fixed horizontal grabrail
6. Fixed vertical rail and adjacent alarm pull-chord with two red triangles
7. Automatic hand dryer
8. Low shelf with rounded corner
9. Disposal bin for miscellaneous items with sanitary dispenser above (750-1000mm above floor level)
10. Hand basin can be recessed in order for a larger basin to be used (as an alternative to a standard small basin)
The thermostatic mixer tap to be located on the WC side of the basin.
11. Horizontal door pull to enable door to be closed when entering
12. It is essential to keep the area adjacent to the WC clear to allow side transfer onto the WC
13. Fixed horizontal grabrail used as towel rail
14. 600mm deep fixed seat bench with rounded corner and soft round edges
15. Padded tip-up shower seat with back rest. Front edge set 600-700mm from back wall to allow lateral transfer
16. Shower controls - lever-operated, thermostatically controlled (max 41 degrees centigrade)
17. Shower curtain and rail
18. Floors laid with simple falls to flush gully or grating
19. 1026mm door to achieve minimum clearance requirement of 875mm
20. Mirror 1500mm high, located 600mm above floor level
21. WC: flush lever to wheelchair transfer side; transferring from a wheelchair to a WC imposes significant forces, therefore all fittings must be robust. Wing nut fixings should not be used to secure the toilet seat.



Note: All dimensions are in millimetres

Figure 19 Unisex 'Changing Places Facility' (see BS8300 figure 58) where assisted change is to be provided.

Notes:

- This is additional provision: see Table 8 of this guidance note
- Refer to notes on following pages 43-44, extracted from BS8300

Extracts from BS8300, Section 12.7

Changing Places sanitary accommodation

A Changing Places (CP) facility is a combined toilet, shower and changing room for use by people with complex and multiple disabilities who require the help of up to two assistants. The space needs to be fitted with a fixed tracked hoist system so that assistants can fit the user's slings to the hoist and move the person to the various items in the facility. CP facilities require extended space to accommodate disabled people, often with large complex wheelchairs with elevated leg rests, a reclining facility or integral oxygen cylinders, and space to fit slings for use with the hoist. It also needs to be possible for a wheelchair to be parked within the facility when not in use without compromising the safe access and use of the equipment.

As CP facilities are not designed for the use of independent wheelchair users, or to be used as baby changing facilities, it is desirable for facility providers to indicate the location of the nearest unisex accessible WC and the nearest baby changing facility. Further advice on the design and installation of CP facilities, including a suitable logo to identify such facilities, can be obtained by contacting the Changing Places Consortium

<http://changing-places.org/>

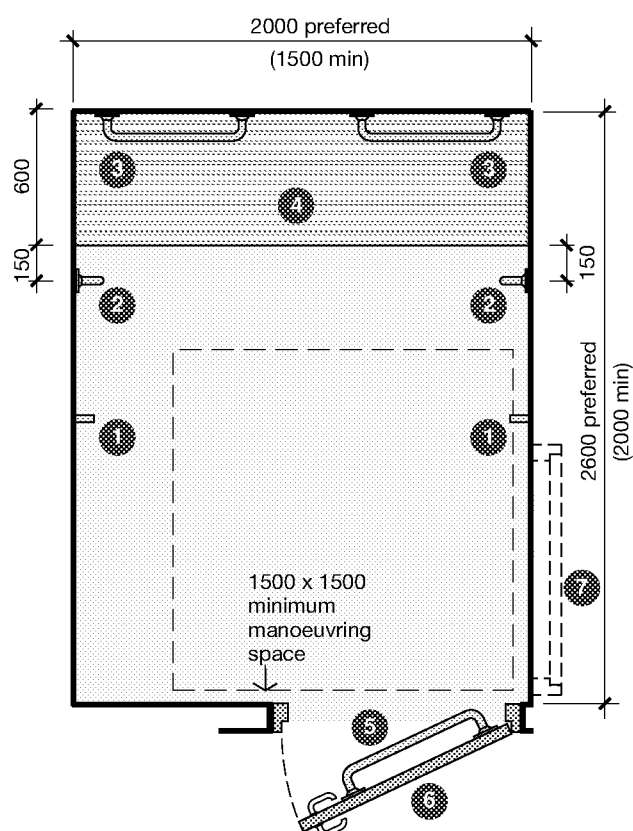
The CP facility should be at least 3.0m wide and 4.0m long, with a ceiling height of 2.4m.

For door requirements refer to BS 8300.

Key

1. Paper towel dispenser
2. Mirror 1500mm high, located 600mm above floor level
3. Large sanitary disposal bin, if possible recessed into the wall
4. Alarm reset button
5. Full room cover tracked hoist system
6. Fixed vertical grab rail
7. Drop-down support rails, one with a toilet roll holder
8. Flat-topped close-coupled cistern providing a back rest and a colostomy changing surface for standing users (where high or low level cisterns are used, a rail with a padded back rest and a separate colostomy changing shelf 125 mm to 150 mm deep and preferably 400 mm wide, with its surface 950 mm above floor level, should be provided)
9. Peninsular WC (see Figure 55 of BS8300 for the location of associated fittings)
10. Large power-assisted height-adjustable washbasin
11. Waste disposal bin
12. Manually-operated hand dryer
13. Retractable privacy curtain/screen
14. Alarm pull cord
15. Height-adjustable showering / changing bench, min. 1800 mm long
16. Floors laid with simple falls to flush gully or grating
17. Shower unit
18. Wide paper roll dispenser for use on the changing bench
19. Sanitary towel dispenser
20. Two clothes hooks, one at 1050 mm and the other at 1400 mm above the floor
21. The doorway should comply with BS8300 requirements
22. Horizontal door pull to enable door to be closed when entering

NOTE: Details of common features of sanitary accommodation are described in 12.2 and accessories related to toilets in 12.6.6 of BS8300. Advice on particular products is available from the Changing Places Consortium (see Appendix).



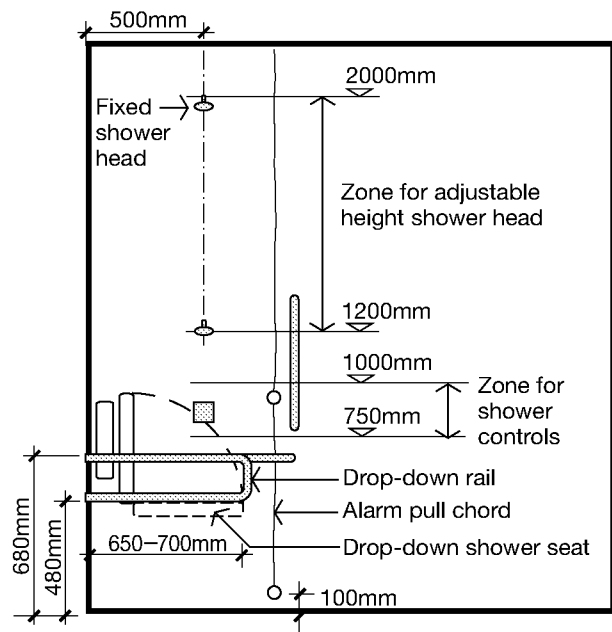
Key:

1. Two clothes hooks set at 1400mm and 1050mm above finished floor level
2. 600mm vertical grab rail securely fixed to side wall and set 800mm from floor level to the bottom of the rail
3. 600mm long horizontal grab rail securely fixed to back wall and set 680mm above finished floor level
4. 600mm deep cantilevered changing bench set at 480mm above finished floor level
5. Horizontal door pull to enable door to be closed when entering
6. Door to achieve minimum clearance requirement of 875mm
7. Alternative door position

Note: All dimensions are in millimetres

Figure 20 Accessible changing cubicle within a main changing room (Ref Table 8, p44)

- Shower controls should be lever-operated and located at an accessible height - see Figure 21. They should be thermostatically limited to a maximum temperature of 41°C to meet the BuildCert/TMV Scheme.
- Floor finishes must be slip-resistant even when wet.
- Water must be contained within the wet areas by the provision of suitable drainage and permanent inset matting.
- Avoid complex falls in the floor that will make standing or manoeuvring a chair difficult and hazardous; the slope should be simple and shallow, no greater than 1:35 and no less than 1:50.
- Upstands separating wet and dry zones must be avoided as they are an obstacle to people with disabilities and a trip hazard to all.
- Design the shower area to allow wheelchair users to transfer between wheelchair and shower seat without getting the wheelchair wet, and so that the wheelchair is still within reach.
- Shower curtains or in larger facilities robust hinged or folding screens should be provided to give additional privacy.

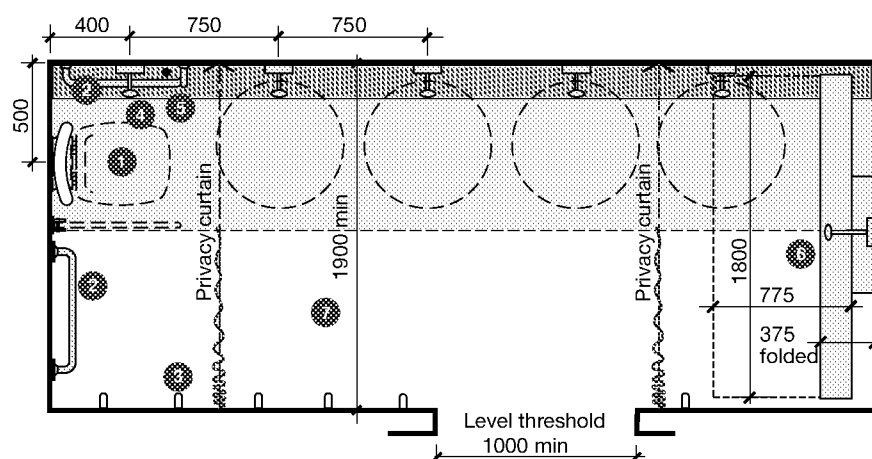


Note: All dimensions are in millimetres

Figure 21 Key vertical dimensions to accessible shower area

Provision	Clubhouses/pavilions (serving only one natural turf pitch)	Clubhouses/pavilions generally	Full-size synthetic pitch	Multi-use games area	Fitness equipment room	Four-court sports hall	Six-court sports hall	Nine-court sports hall or larger	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
One unisex changing room and WC (min) - Fig.16 *	○	●	●	●	●	2	2	2**	●	●	2	●	●	●	●	●	●	●	●	2**
In addition provide an accessible changing cubicle within the main changing area - Fig.20	○	○	○	○	○	○	○	●	○	○	○	○				○	○	○	●	●
Changing rooms large enough for wheelchair teams						●	●	●	●											
In addition provide a unisex 'Changing Places' changing room - Fig 19. (In pools this must be accessible from the main unisex accessible changing area.)						○	○	●										○	●	●
Key: ● Required ○ Recommended																				
Notes:																				
* Fig. 16 is the minimum acceptable arrangement, Fig.'s 17 and 18 are the preferred arrangements.																				
** The above figures are the minimum and should be increased if necessary to reflect the anticipated amount of use and the relationship to the individual facilities																				
General note:																				
Unisex accessible changing facilities must be located wherever there is general changing provision.																				

Table 8 Changing areas – requirements

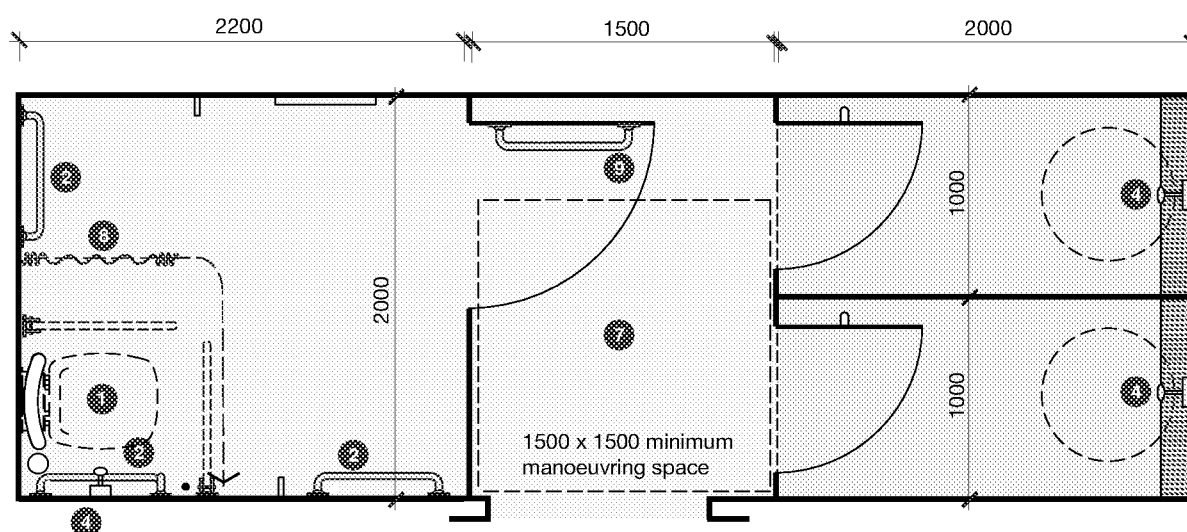


Note: All dimensions are in millimetres

Figure 22 Typical shower area for general use incorporating changing bench

Key

1. 500 x 500mm tip-up shower seat set in corner with grabrail set on shower head wall
2. 600mm long horizontal grabrail providing additional support and can be used as towel rail
3. Towel hooks set at alternate heights of 1400mm and 1050mm
4. Shower controls set at 1000mm above floor level with two shower heads at 1400 and 1800mm above floor level
5. Note: Where practicable, provide a privacy curtain, drop-down grabrail and emergency pull-cord with two red triangles
6. Consideration should be given to the inclusion of an adjustable folding bench together with an adjustable, thermostatically controlled shower.
7. Dry-off area with slip resistant surface laid to simple falls
8. Shower curtain and rail
9. Door to achieve minimum requirement of 875mm clear



Note: All dimensions are in millimetres

Figure 23 Accessible shower cubicle incorporated into main shower cubicle area

8.0 Toilet Provision

Unisex Accessible Provision

All sports facilities should have at least one clearly signposted unisex accessible WC cubicle on every floor of the facility. Unisex provision allows people of either sex to give assistance, which is not possible when the accessible toilet provision is part of a dedicated male or female area.

The provision of accessible toilet cubicles within dedicated male or female areas is considered to be additional provision and cannot replace unisex provision.

It should be noted that these toilets are used by people with a wide range of disabilities and not just wheelchair users.

- A unisex accessible WC cubicle should be accessible from all areas of the facility including social, refreshment, changing and staff areas.

- Every part of a sports facility, including the pool or field, should be within 40m of a unisex accessible WC.
- The cubicle should be located close to the changing areas unless there are dedicated unisex accessible changing rooms incorporating WC's within the changing areas.
- Where dedicated facilities are provided in the changing rooms a unisex accessible WC cubicle should be located close to the entrance to the main facility so that it can serve visitors and spectators as well as participants and staff.
- The scale and type of the facility will determine the number of accessible toilets. However, unisex accessible toilets should be provided wherever there is toilet accommodation.
- Provide an embossed sign adjacent to the entrance door of all toilets.

	Clubhouses/pavilions (serving only natural turf pitches)	Clubhouses/pavilions generally	Full-size synthetic pitch	Multi-use games area	Fitness equipment room	Four-court sports hall	Six-court sports hall	Nine-court sports hall or larger	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
Minimum provision																				
Accessible unisex WC compartment on each floor (can be shared with unisex changing) ¹ - Fig.24	●	●	●	●	●					●		●	●	●	●		●	●		
Dedicated unisex WC compartment (in addition to any provision within unisex changing). Numbers/flow to be determined by the size and layout of the building ¹ - Fig.24		○	○	○		●	●	2	●	○	●	○			○	●	○	●	●	●
Provide at least one cubicle within the general male and female toilets suitable for an ambulant disabled person - Fig.27	○	○	○	○	○	●	●	●	●	○	●	○	●	○	○	●	○	○	●	●
In addition provide an accessible unisex WC compartment located within the 'sports chair' zone to serve people using large sports chairs - Fig.25						○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
In addition provide a Changing Places Facility as Fig.19								●										●	●	

Key: ● Required ○ Recommended

¹ Unisex accessible toilets must be located wherever there is general toilet provision

Table 9 Accessible toilet provision – requirements

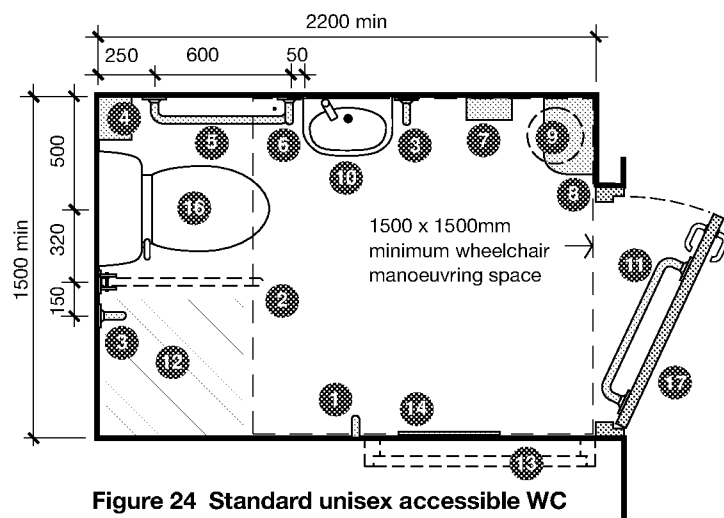


Figure 24 Standard unisex accessible WC (left hand transfer)

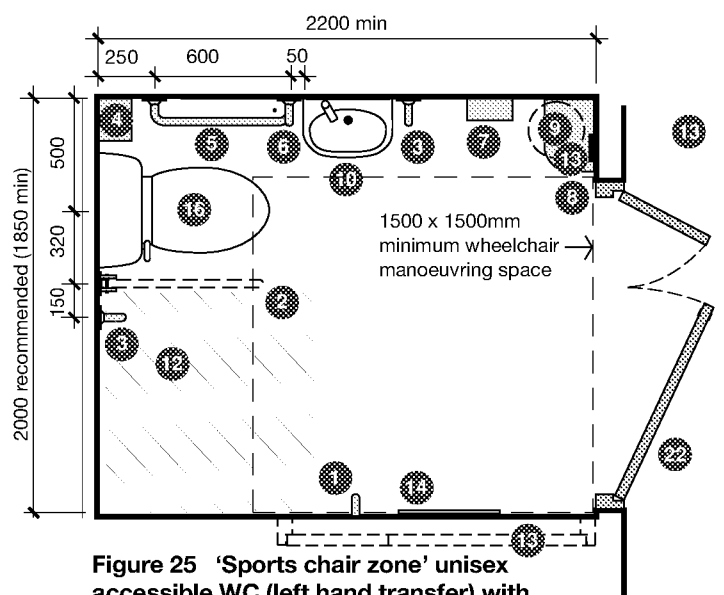


Figure 25 'Sports chair zone' unisex accessible WC (left hand transfer) with power operated door set

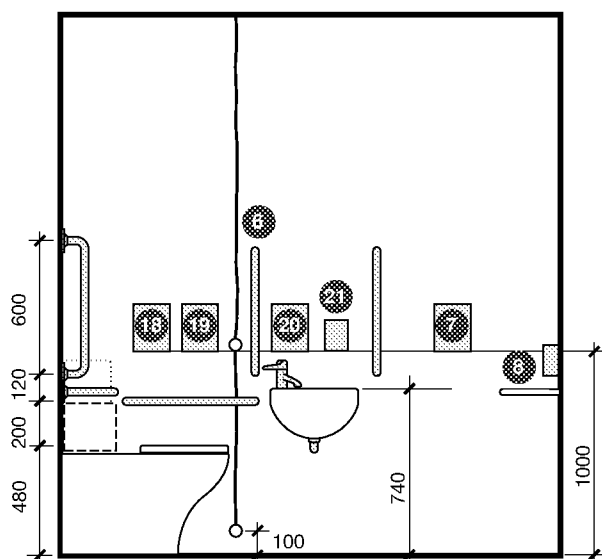


Figure 26 Key vertical dimensions and fittings to accessible WC and changing area

Note: Dimensions to all figures are in millimetres

Key

1. Two clothes hooks set at 1400mm and 1050mm above floor level
2. Drop-down rail (without toilet roll holder)
3. Fixed vertical rail
4. Colostomy changing shelf for ambulant users 950mm above floor level
5. Fixed horizontal grabrail
6. Fixed vertical rail and adjacent alarm pull-cord with two red triangles
7. Automatic hand dryer
8. Low shelf with rounded corner and sanitary dispenser with controls located 1000mm above floor level
9. Disposal bin for miscellaneous items with sanitary dispenser above (750-1000mm above floor level)
10. Hand basin can be recessed in order for a larger basin to be used (as an alternative to a standard small basin) The thermostatic mixer tap to be located on the WC side of the basin.
11. Horizontal door pull to enable door to be closed when entering
12. It is essential to keep the area adjacent to the WC clear to allow side transfer onto the WC
13. Wall mounted access control touch pad set at 1000mm above floor level located clear of door swings
14. Mirror 1500mm high, located 600mm above floor level
15. Colostomy changing shelf for ambulant users 950mm above floor level
16. WC: flush lever to wheelchair transfer side; transferring from a wheelchair to a WC imposes significant forces, therefore all fittings must be robust. Wing nut fixings should not be used to secure the toilet seat.
17. 1026mm door to achieve minimum clearance requirement of 875mm
18. Toilet paper dispenser
19. Alarm reset button
20. Paper towel dispenser
21. Soap dispenser
22. Power operated double door set to achieve minimum clearance requirement of 1200mm for wider sports chairs in a 'sports chair' zone

Design

The layout and dimensions of an accessible toilet are critical to ensure that the cubicle will be properly and safely used. Figures in BS8300 and Approved Document M provide detailed layout and dimensions for a unisex, corner WC.

- The standard layout will allow most users to wash and dry their hands while seated on the WC before transferring back to their chair.
- Where it is necessary to incorporate fittings such as radiators, vending machines, sanitary disposal units and wastepaper bins, these should be recessed or located so that they do not obstruct the defined manoeuvring space / transfer space.
- Ensure that pipe boxing is carefully designed so that it does not restrict movement or create a hazard.
- Where more than one accessible toilet is provided a layout of the opposite hand should be incorporated to give access from both sides.
- The appearance of an accessible toilet is important – it should not appear to be ‘medical’ and should be finished to the same standard of appearance as the rest of the facility, making good use of contrasting to highlight the sanitary fittings and grabrails from their backgrounds.
- Ensure that the door opening is located so that there is a degree of screening from the main circulation areas. This will mean that the WC cannot be seen if the door is ajar when the cubicle is not in use. More importantly, it will prevent a user being seen while their helper is exiting or entering the cubicle.

- Use plastic-coated handrails and grab rails for comfort.
- In larger sports facilities, where there are several unisex WCs one unisex accessible peninsular WC should be provided as detailed in BS 8300.

Religious and cultural considerations

It is important that designers consider carefully the religious and cultural implications of their proposals and consult closely with local disabled users.

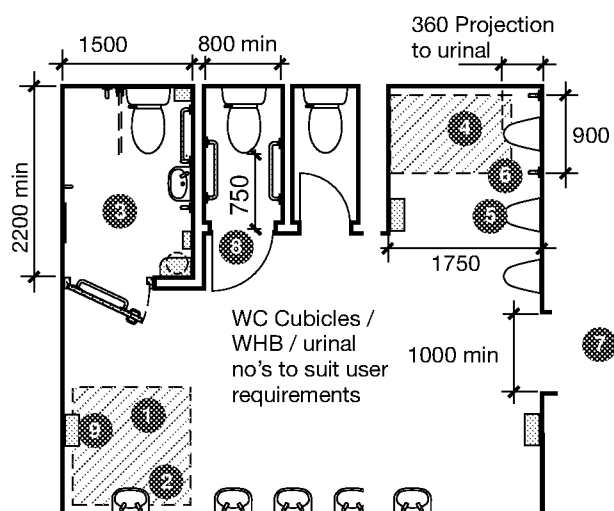
A scheme serving certain cultural communities may for example have aspects of toiletry and hygiene that require careful design. Communal shower/changing facilities and urinal troughs could be unacceptable given the requirement for complete visual privacy and there may be a need for ancillary facilities, such as a bidet or other sluice arrangements. Additionally, the orientation of facilities could be important.

General provision

Except in small facilities ie where there is less than four cubicles in a toilet, a cubicle (as illustrated in Fig 56 of BS8300) should be incorporated within each general male and female toilet area for use by the following:

- Older people
- Carers accompanying small children
- People with a need for mobility equipment such as walkers, crutches, higher seat levels.

Within each general male toilet area one of the urinals should be fitted with grab rails.



Note: All dimensions are in millimetres

Figure 27 General toilet provision incorporating wheelchair accessible toilet facilities

Key

1. 1500 x 1500mm wheelchair space to hand basin
2. Hand basin set at 720–740mm high to be suitable for wheelchair and ambulant disabled users
3. Accessible WC cubicle
4. 1400 deep by 900mm wide wheelchair space
5. Urinals set at 500mm maximum height, except urinal installation for wheelchair users, which should be set at 400mm max height
6. Vertical grabrails (set at 1100mm centre line height above floor level) for wheelchair users – keep space clear of pipework
7. Suitably designed access lobby giving privacy with ease of access
8. Cubicle for ambulant disabled people
9. Hand dryers set at 1000mm above floor level

9.0 Social Areas

Social areas must give unhindered access to disabled people either independently or with companions. All corridors and doors leading to refreshment/social areas must comply with the minimum space standards for the facility.

Layout

- Gangways in areas between tables and other furniture and fittings should have at least 1.2m clear width.
- Tables and chairs should be placed in a regular layout rather than a random, complex arrangement.

Furniture

- Furniture should be stable but movable to allow maximum access within social areas.
- Consider the use of tables with legs rather than a central pedestal. This will ensure stability if the table is used to support a person rising from their seat. Tables should have a clear under-top height of at least 0.7–0.75m to allow a wheelchair to be drawn in.

Seating

- Seating should be provided wherever people may need to wait.
- Where provided, seating should be stable and easy to rise from.
- Where low-level seating is provided, some seating with a seat height between 0.45m and 0.475m should be provided.
- Seats should not be upholstered in absorbent material.
- They should incorporate fittings with and without armrests.



Appropriate colour schemes and furniture can create an accessible and inviting interior

- Seating should be arranged to allow wheelchair users to sit alongside others without obstructing the general circulation routes.
- Seating should contrast visually with the surrounding surfaces.
- Seating areas should be acoustically 'quiet' to allow easy conversation.

Servery

- Bars and self-service counters should be accessible.
- Provide a section lowered to 0.76m above the floor with a clear space of 0.7–0.75m underneath. However ensure that hot surfaces are kept away from these locations to protect children from accidental access.
- Induction loops should be fitted at counters.
- Control natural light entering the space and design artificial lighting to avoid glare. Avoid specifying large areas of shiny surfaces which can cause reflective glare. Both types of glare can cause disorientation and discomfort to blind and partially sighted people and are not conducive to lip reading.
- Where tray slides are used, they should be continuous to the till.

Vending machines

- Vending machines should have clear display panels and instructions.
- The coin slot should be no higher than 1.2m above floor level.
- There should be adequate manoeuvring space in front of the vending machine for wheelchair users.



Address access issues and integrate solutions into the design to create interesting facilities for everyone

10.0 Communication Systems

Public Telephones

Access to a telephone is particularly important to help disabled people maintain their independence. Except for small pavilions and clubhouses, all sports facilities should have a public telephone that can be used by everyone. This means that they should:

- Be located where there is minimum background noise and be approachable from the front and the side.
- Be fixed at a height which allows access by children and people of short stature and wheelchair users.
- Be fitted with an inductive coupler to assist hearing aid users.
- Have a raised tactile button on the five numeral.
- Have a shelf to enable the use of a portable text phone.
- Be clearly signposted and located so that the phone and user do not create an obstruction or hazard.
- Have an unobstructed space of 1.5 x 1.5m in front of the telephone.

Public address systems

These should be clearly audible and wherever practicable, supplemented by visual information. Details of systems designed to assist people who are deaf or hard of hearing can be obtained through the RNID (see contact addresses).

Text phones

Many people with hearing impairment may use text phones to communicate over the telephone.

- Two-way textual messages can be communicated over the telephone line.
- Large sports facilities should be equipped with a text phone to facilitate telephone bookings and general communication by staff or users with a hearing impairment.

Induction loops

Induction loops can help many hearing aid users to communicate. Sound from a microphone or sound system is converted into an electrical field and fed into a loop producing a magnetic field.

Hearing aids are set to the 'T' position to pick up the broadcast information. Induction loops that comply with BS 7594 and BS EN 60118-4 should be fitted:

- At reception counters.
- In meeting rooms.
- In dance and exercise areas.
- In other areas where aural information is given.

There is a chance that people wearing hearing aids in adjacent rooms may experience 'overlap'. This may be a problem for committee rooms or rooms where confidentiality is important, and in these cases it may be more suitable to use an infrared system.

Infrared systems

Infrared systems work by converting the sound into an infrared light signal and users wear a special headset to pick up the signal. Infrared systems transmit a higher quality of sound to the user than induction loop and infrared can be easily contained within a room. Infrared light is absorbed by sunlight and therefore these systems are not suitable for example within the seating bowl of a stadium. The head sets are expensive and require to be charged, cleaned and stored. Induction loops rely on the users own hearing aid as the receiving equipment.

Controls

- All controls should be clearly visible against the background. This means good lighting and the use of contrasting colours.
- Controls should be located in a consistent and logical manner and should be mounted at a height accessible to everyone. However, where controls may pose a safety risk to children or people with learning disabilities, then protection (e.g. lockable covers) should be provided.
- Wherever possible consider the use of embossed tactile buttons and controls for use by staff and users.

Signs

A large proportion of disabled people have a hearing or visual impairment and it is common to have both. People with either or both of these impairments rely upon clear signage in order to move around and use a facility independently. Good signage can mean that a person with a

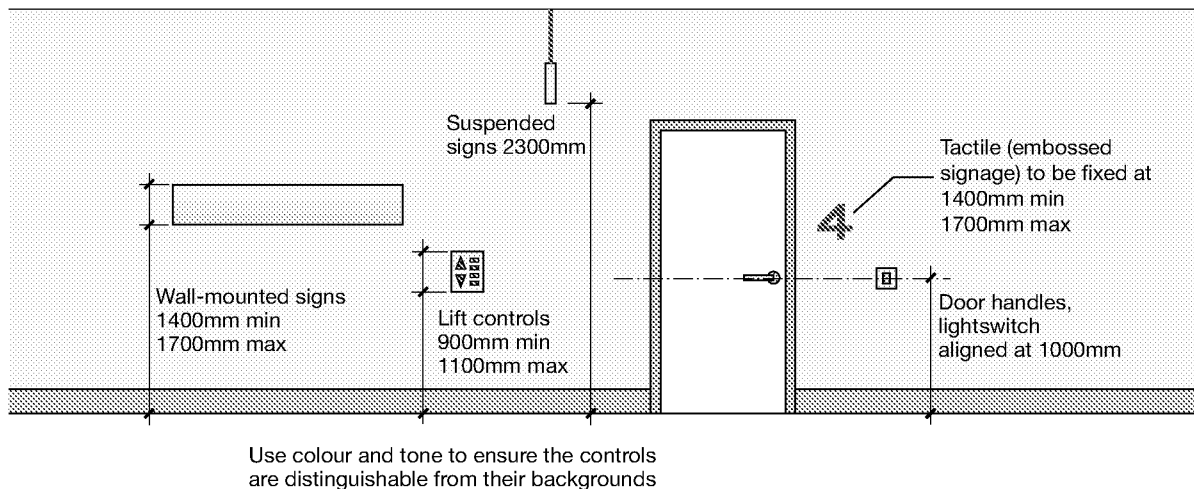


Figure 28 Signs and controls – consistent positioning is critical

hearing impairment can use a building without having to ask questions, and it can help a person with a visual impairment to navigate more effectively.

- Signs inform and provide reassurance.
- Signs may give people one of their first impressions of a facility and contribute significantly to the character and aesthetic of the building.

The following sets out clear requirements for a good signage scheme and is intended to provide the basic information around which an imaginative and effective scheme can be created. For detailed information on signage refer to the Sign Design Guide: a guide to inclusive signage published by the JMU Access Partnership.

www.signdesignsociety.co.uk/



Clear simple signs with strong contrast between lettering and background, and between the sign and the adjacent space are essential.

General requirements

- To avoid confusion the number of signs should be kept to a minimum in order to create an easily understood chain of information.
- The location of signs is critical to allow visually impaired people to find the sign and then get as close as possible to the sign to see it or read it by touch.
- Signage should be consistent in location and style throughout the building.
- Signs should be obvious, identifiable, clear and legible. Use of colour and contrast is important in respect of readability.
- Wherever possible, signs should incorporate words and symbols. The symbols should be standard symbols in common use that are easy to understand.
- Where practical, signs should be located on walls at average eye level and have embossed letters, raised pictograms and direction arrows.
- Signs should be suitably illuminated and located so they are free from glare.
- The use of suspended signs should be avoided wherever possible. Where they are unavoidable the size of the text and sign should be adequate to allow it to be read from a reasonable viewing distance.
- Signs should not have sharp edges and should not cause an obstruction.
- Wall-mounted information boards should be provided at lift landings, floor landings on staircases and at other major decision points on main circulation routes.

- Signs to rooms, with the exception of toilets, should be placed on the wall of the leading edge side of the door so that the sign is visible even when the door is open.
- Avoid signs on 'A' boards or other portable systems that could obstruct access and cause a hazard to visually impaired people.

Design

- The sign layout should be clear and logical.
- Text should always be 'left justified' except where directional arrows are incorporated. Where arrows are used the text should be justified on the side of the direction indicated. For example, on right-pointing arrows text should be justified on the right.
- Where text and arrows indicate 'straight ahead' they should be placed at the top of the sign with arrows on both sides of the text.
- Text signs should be a mixture of upper and lower case letters – this is because words are recognised by shape rather than by individual letters.

The font style should be Helvetica-type sans serif or a similar uncomplicated style. Serif-type fonts can be used but only where detailed guidance has been sought.

- The spacing between letters and words should be increased by 20–30% to suit the selected letter form. Inter-word spacing should be increased by about 25%.
- Line spacing should be increased by 15–20%.
- The size of text on a sign should be consistent.
- For long distance reading a minimum character size of 150mm is recommended.
- For medium range reading (internal directions etc) a character size of 50–100mm is recommended.
- For close-up reading (wall mounted information etc) a minimum character size of 15–25mm is recommended.



- Tactile characters should be embossed or raised to an approximate thickness of 1–1.5mm and should not be engraved. Reading an embossed sign in the vertical plane is not comfortable; inclining the face of the sign at 45–60 degrees from the horizontal provides a more natural position for the hand.
- All signs should be in colours that contrast with the background, 70% being the optimum contrast.
- Similarly, the sign characters should contrast with the sign background.
- Sign borders will enable a sign to be located on both light and dark backgrounds.
- Signs should be non-reflective with a gloss factor no greater than 50%.
- Avoid long lists of names on direction signs. If possible group the names in sets of no more than three.

Braille

Braille comprises a sequence of fine dots, proud of the surface, read by passing the fingers across them. It is the method of reading used by some people with a visual impairment or total blindness.

- If possible, Braille should be used wherever embossed characters are used.
- Braille should be English Standard Braille.
- Grade 1 Braille should be used for single words and short descriptions.
- Grade 2 Braille should be used where it is necessary to reduce the length of multi-word signs.
- Braille signs should incorporate a marker such as a notch at the left hand side to help locate the Braille message.

11.0 Finishes

The correct selection of finishes is very important, particularly to assist people with a disability. Unsuitable finishes can make the building difficult to use and can lead to confusion and possibly danger.

Acoustic requirements

Hard and reflective surfaces

Spaces enclosed exclusively with hard surfaces should be avoided. They are likely to be noisy and reverberant spaces that are confusing for people with sensory impairments to use.

- All rooms and spaces should have some soft, sound-absorbent surfaces to provide a suitably quiet acoustic environment.
- Where possible, separate quiet and noisy areas by buffer zones.
- High levels of background noise can make it difficult for people with a hearing impairment to communicate with facility staff or other customers / colleagues.

Ceilings

Ceilings usually provide the best opportunity for the provision of acoustic absorbency.

Visual requirements

Visual contrast

Colour should be carefully considered to enhance the facility's aesthetic qualities and to optimise the practical use of the building, particularly the ability of people who are visually impaired to move around without difficulty.

Of people registered blind or partially sighted, 96% have some degree of vision that can be significantly enhanced by good use of colour, luminance and textured surfaces.

Guidance on the use of colour and contrast is available in BS8300 Annex B and from the Design Guide based on the Project Rainbow research published by ICI Plc.

www.britainssports.com/specifications/colour/accessibilityguidelines.pdf

When moving through a building, a visually impaired person tries to find contrast between large areas of colour, such as the junction between a wall and ceiling. This technique gives them clues to where they are and the size of the space they are in.



Research has shown that colour and tonal differentiation between ceilings, walls, doors and floors makes a significant difference to visually impaired people as they navigate through a building. Tonal contrast is as important as colour contrast. Some sight conditions can lead to confusion between similar colours and tones.

- Colour schemes should not be monotonous or bland.
- Ceiling colours should be sufficiently different from wall colours.
- Wall colours should be sufficiently different from ceiling and floor colours.
- Door colours should be sufficiently different from wall colours.
- The leading edge of doors should contrast with the main body of the door.
- Floor and stair colours should be sufficiently different from adjoining wall colours.
- All fixtures and fittings must contrast visually with the adjacent surface on which they are located.

The contrast should be incorporated into the overall design of the colour scheme rather than imposed upon it.

- Avoid using extreme contrasts in colour in irregular, busy, geometric or striped patterns.
- The colour used for a trim feature, such as a skirting or architrave, should not be an intermediate of the colours of two adjoining critical surfaces. This colour should maintain or improve the impact of the different colours used.
- Paint manufacturers can supply tables that define the minimum colour contrast thresholds required to assist visually impaired people, and so help to create an interior that is acceptable to everyone.

Surface

- Walls and floors with a glossy appearance confuse visually impaired people.
- Glossy surfaces should be avoided. Glare and reflection make it difficult for people to lip-read.
- Use matt or mid-sheen finishes to obtain the maximum benefit from colour differentiation.

Tactile requirements

Variation in surface texture provides important information, particularly to visually impaired people. It can:

- Warn of hazards.
- Give information that helps identify location.

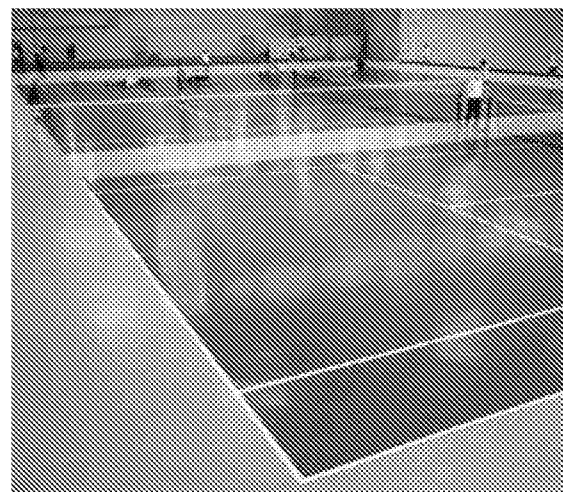
Walls

- Avoid large repeating patterns with bold contrasting colours that can distract people when they are lip-reading – at a reception counter or in a meeting room, for example.
- Tiling, like all wall surface colour, should be used to provide a pleasing contrast to fittings, rails etc. For example, the ‘all white’ appearance of sanitary fittings and white wall tiling should be avoided.
- Consider carefully the texture of walls as some users depend upon contact to gain support and orientation.

Floors

The look, texture and acoustic quality of flooring can affect how a building is used. It can give directions, suggest the type of activity space and help to create the appropriate atmosphere. All flooring should be:

- Firmly fixed to ensure safety and ease of movement by wheelchair users and people with ambulant disabilities.
- Free of tripping hazards, particularly at the junction between materials.



Contrasting colours facilitate court markings and contribute to a bright environment

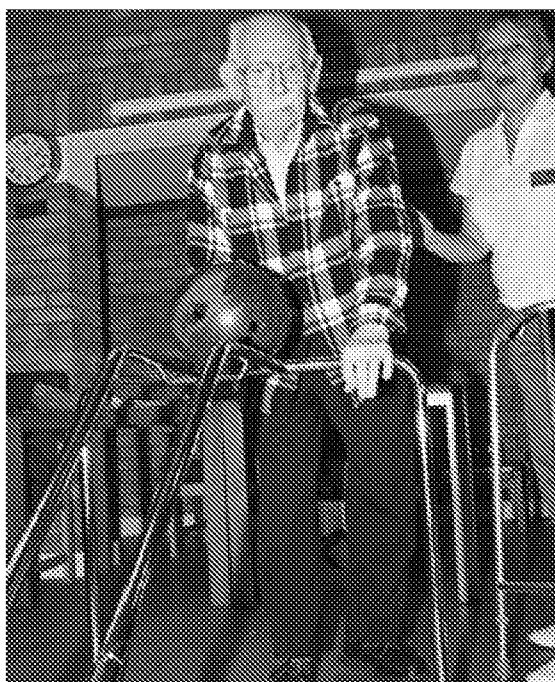
- Able to withstand marks left by wheelchairs and other mobility aids so that users are not restricted by over-protective management regimes.
- Slip-resistant.
- Selected to avoid a highly polished surface as they are slippery and may look wet, which may affect the way a person may move across them.
- Non-glossy. Glossy floors reflect overhead lights, causing confusion and discomfort for some visually impaired people.
- Shallow dense non-directional pile where carpet is used.

In areas that may become wet, such as the building entrance, changing and shower areas or poolside, it is vitally important to specify slip resistant surfaces or safety flooring.

- In wet areas the floor should be kept as dry as possible. Adequate heating is essential (underfloor heating can be particularly beneficial) and the floors should be laid to ensure adequate drainage, with falls at a preferred gradient of between 1 : 35 and 1 : 50.

Tactile floors

- For the visually impaired person, changes in the texture of the floor surface can warn of potential hazards and give directional information.



- It is critical to use recognised tactile floor patterns in the appropriate location as incorrect use will cause confusion and could be dangerous.
- Wherever possible the design should exclude protruding features that project into circulation routes, since these can be a hazard to blind and partially sighted people. In the event that this is unavoidable, a suitable barrier should be used to prevent access to the affected area.

Glass walls and screens

Glass walls and screens need to be designed to meet the following:

- Should conform to BS 6262.
- Should be highlighted with coloured warnings (not treated glass) at least 0.15m square or unbroken lines at least 50mm high that contrast with the surface and are located between 0.85m and 1.0m to be visible to wheelchair users, and between 1.4m and 1.6m to be at eye level for ambulant people.
- Care should be taken to avoid reflections in the glass as this can create confusion for some people with limited sight.
- Exposed edges of a glazed screen should be highlighted with a strip of contrasting colour and luminance to its surroundings.

12.0 Services

All services must be carefully located to avoid creating hazards or obstacles to people moving through the facility.

- There should be no exposed angles.
- Carefully consider the effects of background noise or magnetic fields from service equipment that may affect people's ability to communicate.

Electrical services

In large sports facilities the main power supply cable to the building may induce interference in hearing aids and should be routed away from public and staff areas or be suitably shielded.

Heating

- Locate the pipework and any heat sources such as radiators to avoid hazards to users.
- Where radiators are used, they should be of the low surface temperature type or be covered with a suitable low temperature casing.
- Uncomfortable variations in temperature should be avoided.
- Ensure all areas are well heated.
- Locate and detail windows and exit doors to avoid the creation of draughts and cold areas.
- Heating, ventilation and air-conditioning systems should be quiet.

Lighting

Artificial lighting systems must create a confusion-free environment that avoids excessive reflection, glare, deep shadows and wide variations in lighting levels. The lighting design should aim to achieve this by controlling the location, quantity and quality of both natural and artificial light.

- Careful lighting design can accentuate changes in texture and colour and provide additional information to visually impaired people.
- Changes in lighting levels should be gradual throughout the facility.
- Avoid locating reception desks in front of large areas of glazing where high light levels could put a receptionist's face in shadow and make lip-reading difficult.
- Daylight and particularly direct sunlight should be carefully controlled to reduce glare. This may be a particular problem during winter months when sun angles are low.

- Avoid shadows that could conceal potential hazards. This can be achieved by ensuring there are enough light fittings to provide an adequate coverage of light.
- Where possible, minimise the use of spotlights in isolation, since this type of light fitting tends to create pools of light and shadow.
- Avoid the use of uplighters set in floors or paved areas where people are likely to walk, since anyone walking over these fittings is likely to experience painful glare.
- Downlighters should be carefully located so that they do not create shadows across people's faces making lip-reading difficult – at the reception desk for example.
- Staircases should be well illuminated – minimum 100 lux at tread level.
- Lighting should meet CIBSE standards for the type of space, and relatively even, giving good differentiation of surfaces and levels without glare.
- Indirect rather than direct lighting is the most comfortable form of light.
- Light sensors can be used to control light levels by the introduction or reduction of artificial light.
- Particular care should be taken with the design of lighting insert systems in areas with shiny surfaces in order to avoid reflections and glare.
- Glazing at the end of corridors should be avoided; side lighting is preferable.
- Some fluorescent fittings can cause interference in hearing aids. Minimise this by careful placement of light fittings and by using high frequency fittings.



13.0 Management Issues

The design measures included in this guidance will help make facilities more accessible to disabled people and more user-friendly for everyone. However, the sports facility must be managed effectively in order to meet the needs of the widest range of disabled people.

Research has shown that the way a sports facility is managed has a significant impact on how accessible it is to disabled people, and how likely they are to return.

For example, an accessible toilet that is used as a store is useless, as is the installation of an induction loop at the reception desk if members of staff have not been trained to use it.

Similarly, the carefully designed lobby into the changing room will be rendered inaccessible by the careless positioning of obstacles such as a large litterbin.

Examples of issues to be addressed:

- Pathways, ramps, steps, corridors, lobbies should not be obstructed.
- All walking surfaces, particularly ramps and steps, should be regularly maintained and kept clean to ensure slip-resistant surfaces. During winter weather, additional steps should be taken to avoid ice build up on walking surfaces.
- Ensure that doors are maintained to open and close with the minimum possible force.
- Ensure that slip-resistant floors are not made dangerous by use of cleaning fluid or polish.
- Signs and maps, both audio and visual, should be checked regularly to make sure routes are clearly indicated, especially escape routes. The accidental removal or obliteration of one or two signs can create great confusion, as can the addition of temporary signs by staff who have not considered the clarity of the whole route.
- Lifts and hoists should be checked and maintained regularly, for example to ensure that the lift stops exactly level at each floor.
- Induction loops and other electrical aids should be regularly checked – deterioration and failure are not always obvious.
- Ensure that the dedicated accessible car parking bays are used only by those for whom they are intended.
- Ensure that light fittings are maintained and delivering optimum light levels at all times.
- Ensure that flooring does not become worn or loose creating a trip hazard.
- When carrying out maintenance and redecoration ensure that existing accessible provision is not compromised, for example by using an inappropriate fitting or an unsuitable colour scheme.



- The facility should have a policy on assistance dogs.
- The facility should have an emergency evacuation strategy which includes the needs of disabled people.
- Waste bins placed in wheelchair transfer spaces.
- Alarm pull cords tied up in toilet and changing rooms.
- Shower heads being left too high in accessible changing rooms.

All buildings should have a management / maintenance manual addressing the above issues, with explanations to emphasise the importance of good management in maintaining quality access to the facility.

All staff should have disability equality training ensuring the delivery of good customer service. This training needs to be continually updated and refreshed for existing as well as new staff.

Provide information in various formats so that visually impaired people can use it. This does not necessarily mean that such materials should be immediately to hand, but that mechanisms are in place for providing different formats and getting these to customers quickly.

It should be possible to provide information in audio, Braille, large print or web-based formats.

The information should include:

- Opening times/booking conditions
- Travel details such as bus routes, train stations and community transport. Note that many people with disabilities rely on public transport.

At large sites:

- Consider separating the tasks of answering the telephone and staffing the main reception so that callers' queries can be answered in a quiet environment at busy times.
- Adopt a strategy for directing text phone calls to a central point where the most frequently asked questions can be dealt with on behalf of a number of different sites.
- Establish and maintain emergency procedures for people with various disabilities who are likely to use the facility.

14.0 Spectator/Viewing Provision

Wherever possible, spectator seating, media seating and executive boxes should be designed to be accessible to everyone.

When designing spectator/viewing provision, the following should be considered:

- At very large venues where crowd control and safety are particularly important factors, it is acceptable to provide separately designated points of access into spectator areas for disabled people. These entrances should provide a clear opening of 1.0m.
- A minimum clear width of 0.65m must be provided between rows of seats.
- Without blocking circulation routes, consider making space for guide or assistance dogs to sit next to their owners.
- Provide at least six designated wheelchair spaces, or 1% of the spectator capacity, whichever is the greater.
- Wheelchair user spaces should be located within the seating area so that users can sit next to seated companions.





- Wheelchair user spaces must be located so that users do not feel cut off from the rest of the crowd.
- In order to provide for greater demand during special events, provision should be made for increasing the number of wheelchair user spaces by the provision of removable seats.
- Sight lines must enable all wheelchair users to have a clear view of the action at least up to the edge of the area of play and unobstructed by people in front or by structural features.
- The seating arrangements should ensure that good sight lines are achieved even if the crowd stands up at moments of excitement.
- Wheelchair spaces should be a minimum 0.9 x 1.4m each.
- Handrails should be provided to stepped access routes to assist ambulant disabled people, and if practicable, central handrails are the preferred option.
- Barriers, balustrades, handrails and columns must not obstruct sight lines.
- Where spectator provision includes a public address system, this must be supplemented with appropriate hearing aids, such as induction loops and visual text displays for people with hearing impairment.
- Consider providing match commentaries to assist people with visual impairment. This can be achieved by placing headphone sockets at specific locations or by using an infrared or FM communications system.
- The design of informal viewing areas in sports facilities should consider the needs of all users. For example viewing from the reception area, balcony or a circulation space should have areas of suitable height to allow wheelchair users or children adequate sight lines ⁷.
- The design of bleacher seating and rebound screens should also be considered when temporary spectator seating is created. For example a raised dais and ramp section might be integrated into the lower sections of a retractable bleacher seating unit.

⁷ It should be noted that such casual viewing into sport spaces should be capable of being screened off to give privacy to users if required.

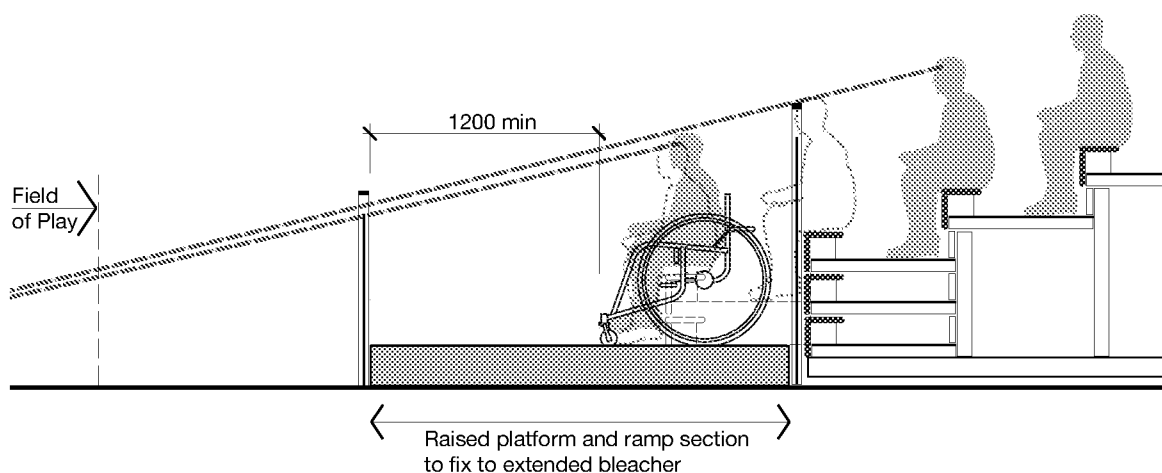


Fig 29 Section indicating raised platform to bleacher seating for elevated wheelchair viewing

15.0 Swimming Pools

Detailed guidance on the design of swimming pools can be found in separate Sport England Design Guidance.

See 'Swimming Pools' design guidance note download available from the Sport England website.

The following section emphasizes the key considerations to ensure that access is provided in all swimming pool facilities.

Swimming is an important activity for many disabled people at both competition level and purely for recreation. Water supports people's bodies freeing those with mobility impairments from the need to use mobility aids, such as crutches and wheelchairs. Most of the guidance in the earlier sections of this document is applicable to swimming pools. However, swimming pools do pose particular problems for the designer and manager and these are often overlooked.

- All pools must be designed to allow full integration of disabled swimmers in all activities. Management should also provide integrated swimming sessions with additional support, as well as 'specialist' sessions for those who require specialised help or prefer segregated activities.
- The route through a swimming pool complex should be the same for a disabled swimmer as a non-disabled swimmer.
- Bare feet on wet floor surfaces make movement more difficult and more dangerous for people with mobility impairments.
- Disabled people can often be self-conscious in a pool setting because they may be without their aids, are physically exposed, and may require assistance to enter the pool.
- Disabled swimmers are often most vulnerable when making their way to the pool or back to the changing room. Once in the water they can be relatively safe.
- People who need glasses to correct a visual impairment or hearing aids to improve their hearing are likely to be at a considerable disadvantage when swimming.
- The pool environment can be visually and acoustically confusing if not properly controlled.

Changing areas

Changing areas are often inadequate and poorly designed – particularly for disabled users. It is very important that all changing areas are of a good standard and provide a pleasant environment. The design will affect users' perception of the facility and, if done badly, can restrict or stop people using part or all of the facility. Modern pools have a mixture of single and mixed-sex changing provision comprising:

- Village changing.
- Large, single sex open-plan changing areas with benches.
- Enclosed rooms for families or small groups of users.

All of these changing room configurations, with the addition of some unisex accessible changing provision, can be designed and detailed to provide integrated and accessible changing facilities which address the needs of a variety of different disabled swimmers.

To encourage maximum use of the facility, ensure that the needs of disabled people are considered at the very early stages of design.

General considerations

The following should be provided as part of the design:

- High quality, accessible showers and WC's in close proximity to the changing areas.
- Benches at least 0.45m deep (0.5m preferred) from front to back.
- In order to provide space when assisting an adult there should be a 1.8m length of bench 0.6m deep.
- Mats to place over benches for people with sensitive skin and for those who are susceptible to injury.
- Lockers within reach of children and disabled swimmers, i.e. 0.4–1.3m high.
- At least four 'full-height' lockers typically 1.8m high by say 0.4m wide for storing mobility aids, for example crutches, callipers and artificial limbs.
- Adequate space in all changing areas/rooms for wheelchair users and others with mobility impairments to transfer to self-propelling skeleton waterproof chairs.

- Minimum of two self-propelling skeleton waterproof chairs, not only for wheelchair users but for ambulant disabled people who become less mobile without their aids.
- Safe and secure storage for wheelchairs.

Changing villages

Well designed village changing will meet the requirements of many disabled swimmers. It will provide privacy and at the same time allow users to be accompanied by someone of either sex if required. Provide at least four large cubicles suitable for use by disabled swimmers.

Open-plan changing

A number of large cubicles and/or changing rooms are required to give additional privacy and accommodate the support rails that are required by some disabled swimmers.

Changing rooms

These are often dedicated family or group rooms. However, they can be used to great advantage by individual disabled swimmers or small groups of disabled swimmers who require more privacy or space when changing.

Family changing cubicles

Where space is available family changing cubicles should be provided. These should have a changing bench 0.6m deep by 2.0m wide and a small play pen to hold a toddler safely when parents are changing or dealing with others.

Ideally, to provide room within the cubicle for a wheelchair user and to accommodate the support rails that are required by some disabled swimmers, the cubicle should be a minimum of 2.0 x 2.0m and preferably 2.0 x 2.6m. See figure 20 on page 43 and Table 10 below.

Facility type	Minimum number of Family / Disabled Cubicles
Small Community Pool (20m)	2
Community/Competition Pool (25m x 6 lane) + Learner Pool (13m)	4
Competition Pool (25m x >6 lane) + Learner/Warm Up Pool (20m)	6
Competition Pool (50m) + Learner/Warm Up Pool (20m)	6-8

Table 10 Family / Disabled Cubicles - requirements

	20m swimming pool	25m swimming pool	50m swimming pool	Learner pool	Diving tank
Self-propelling waterproof chairs (min)	1	2	3	*	*
Poolside hoist (single position)	●	●			○
Poolside hoist (multiple position)	○	○	●	●	●
Submersible pool surround lift	○	○	○	○	○
Mobile hoist	○	○	○	○	○
Portable easy going steps	○	●	●	●	
Minimum number of full-height lockers	4	4	8	*	*
Minimum number of wheel-chair accessible lockers	4	4	8	*	*
Changing mats	●	●	●	*	*
Key: ● Required ○ Recommended * As main pool provision					

Table 11 Pool equipment – requirements

Unisex changing provision

To enable helpers of either sex to assist disabled swimmers, all pools should have at least one fully equipped unisex accessible changing room (See Table 8). Fifty-metre pools should be provided with at least two rooms. The changing area should be self-contained and include:

- Facilities for hanging clothes and towels and access to suitable lockers for clothes storage
- Hair and body drying facilities (consider wall-mounted dryers with flexible outlets)
- Full-length mirror
- Shelf for personal items
- Shower
- WC
- Appropriate support rails
- Emergency pull-cord with two red triangles allowing activation by someone on the floor
- Visual and audible fire alarm.

Changing Places Facility

For swimming pools likely to be used by severely disabled swimmers who require assistance to change, large changing cubicles should be provided (See Table 8).

In addition to the equipment listed in section 10, the compartment should have:

- A ceiling hoist
- A WC
- A variable height changing bench.

Showers

- All showers should be fully accessible with some semi-enclosed cubicles of appropriate size for use by people who use a shower chair or transferring onto a fold-down seat from a wheelchair.
- Avoid excessive gradients, particularly in more than one direction.

Within each shower area some showers should be fitted with:

- Robust, proprietary drop-down seats that are easy to operate, easily cleaned and maintained, and fold away when not in use.
- Horizontal and vertical grab rails.
- Safe places for soap and shampoo.
- Thermostatic mixing valves with an anti-scald setting (maximum temperature 41° C) that are easy to manipulate with a closed fist by people with a weak grip.
- Separate levers on the controls for temperature and flow adjustment.
- Control valve should be set no higher than 1.2m above floor level.
- Slide bar with a flexible hose and an adjustable spray head. The fittings should be tamper proof to minimise the risk of theft.
- In some locations it may not be possible to use a flexible hose; in which case a two level shower head system should be used.
- A shower wheel chair should be provided as it has some advantages over a permanent seat:
 - Equipped with sides, giving extra support.
 - The user can vary the orientation.

There must be a clear space of at least 1.5 x 1.5m outside shower areas to allow a wheelchair to approach.

Route to the pool

The design of the route to a pool requires care and attention to detail. En route to the pool disabled people are often in an unfamiliar environment without the benefit of their normal mobility aids. The route should:

- Not be confusing or lead directly through a shower area.
- Be free of hazards, particularly standing water and obstacles.
- Have handrails provided between the changing rooms and the poolside to assist ambulant disabled people and those with a visual impairment.
- Provide tactile information at critical points on circulation routes.

Pool design

In the majority of modern pools, the water is level with the pool surround. This arrangement makes entering and leaving the water easier as less upper body effort is required and fewer steps are needed between the edge of the pool surround and pool. The disadvantage is that there is less clear definition between the surround and the pool, therefore clear demarcation of the pool edge is vital.

- Design and detailing of the pool edge must warn swimmers that they are approaching the pool. This is achieved by using colour and tactile information.
- Minimum water depth to provide sufficient buoyancy for adult disabled swimmers is 1.2m. Anything less will lead to people scraping their limbs along the pool bottom. Additionally, shallow depths of water make it difficult for people whose balance is poor to stand upright.
- Learner pools should, however, be accessible to disabled children and other groups who may prefer a shallower depth of water.

Movable floors

Movable floors can be particularly useful in swimming pools as they provide the deeper water necessary for adult swimmers with a lower limb disability whilst allowing flexibility to cater for all swimmers.

Pool surround benching

Benches against the wall on the pool perimeter – especially if they are heated – can be of great benefit to some disabled swimmers. They provide a secure place to rest before entering or after leaving the pool.

Access to the water

Whatever the type and scale of pool, there should be a variety of means of access to the water in order to accommodate all users (see Table 10). It is very important that the design team and the pool management team give careful consideration to this at an early design stage. The various options include:

- Pool access ladder
- Ramped entry
- Steps (built-in and portable)
- Portable slide or chute
- Submersible platform lift
- Hoist.

Pool access ladder

- The ladder should be recessed into the pool tank walls, with treads not less than 0.18m deep from front to back.
- Feet can easily slip down between the treads and the wall so gaps between the back edge of the treads and the face of the poolside should be minimal.



- The treads should be slip-resistant
- There should be no sharp edges
- The ladder should be fitted with continuous handrails on both sides.

Ramped entry

A fully integrated ramp and steps should meet the needs of a wide range of disabled swimmers. This arrangement can be used and enjoyed by all swimmers, especially if it is incorporated into the pool design with imagination. However, a common misconception is that a shelving ‘beach’, often incorporated in leisure pools, is the best solution. This arrangement means that the swimmer has to wade into the pool for a considerable distance without the support of the water. This means that some users will require assistance, for others a handrail would give the necessary support, however, it may not be possible to provide a handrail.



- The Amateur Swimming Association and the Health & Safety Executive recommend that the gradient of a ramp or sloping pool floor be no steeper than 1 in 15.
- Where a ramp or beach has been incorporated into the pool design, 'safe steps' giving access to the full depth of the pool should also be considered.

Steps

As a minimum requirement, in addition to the provision of vertical step ladders, every pool should be provided with a flight of fixed steps that comply with the following criteria:

- Be fitted with handrails that have good grip and contrast on both sides.
- Have handrails with an adequate extension at the top and bottom of the steps.
- Have maximum risers of 0.14m.
- Have minimum going of 0.3m.

- Be fitted with a guardrail where they are recessed into the pool tank.
- Be located at the shallow end.

Lightweight portable step units are available for pools where a built-in flight of steps cannot be incorporated.

- Ensure there is adequate storage provision immediately adjacent to the pool.
- The portable steps should be secured by sockets set flush into the pool surround.
- The goings should be slip resistant and have no sharp edges; any void underneath should be protected to prevent swimmers from entering.

Portable slides and chutes

- These should be lightweight and easy to move.
- Ensure there is adequate storage provision immediately adjacent to the pool.



Todmorden Sports Centre – built-in steps incorporated into the pool surround



Submersible platform lift at Craven Pool, Skipton

Submersible Platform Lifts

Submersible platform lifts provide a flexible and more dignified means of entering a swimming pool for a person unable to walk or having limited mobility. The platform is similar to a moveable pool floor providing a lift set into the pool surround. It enables a wheelchair user to enter and leave a pool with the minimum of assistance.

Hoists

Mechanical assistance should be available to help disabled swimmers into the pool. Some swimmers prefer to be assisted into and out of the water by helpers rather than risk embarrassment by using a slow-moving aid such as a hoist. Hoists are potentially a serious risk to any untrained helper and therefore should only be operated by members of staff trained in their use. When not in use they should be secured against unauthorised use.

Hoists are available in a range of styles. The design and management implications should be considered at a very early stage in the development of the project.

Hoists can be:

- Permanently fixed to the floor in one place.
- Mounted to the floor with a socket and be movable to multiple locations – particularly useful where there is more than a single pool or the pool can be divided by booms into separate pools.

- Overhead electric. Great care should be taken on the selection of a suitable hoist. It should be IP56 rated with any controls operated by low voltage to avoid risk of shock to operators.
- Overhead non-electric.
- Mobile. Care should be taken with selection to ensure that the wheelbase will be stable and not overturn when loaded. Maximum operating weights need to be understood. All wheels should be locked during operation.

The hoist should be discussed with pool users and management. The selected hoist should be fitted with a chair that can be used as a wheelchair to avoid double handling at the poolside. Hoists are also available with additional fittings such as slings and stretcher attachments and the need for these should be agreed with the pool management.

- Hoists should be available to provide access into the learner pool and the main pool at various depths and into a Jacuzzi or spa pool.
- Hoists must be stored safely and conveniently for use at any time.

Equipment and Environment

Transport to the pool

- A minimum of two skeleton-type waterproof wheelchairs should be provided as standard equipment. Storage space should be safe, convenient and easy to access.
- The chairs should be suitable for pre- and post-swim showering.
- Some chairs can be used as toilet chairs.
- Where larger Unisex changing cubicles are provided, they should be equipped with a commode type of shower wheelchair.

Mats

- Adequate storage should be provided for mats and other minor aids to assist disabled swimmers to get changed or enter the pool.

Other Facilities

- If a sauna, spa pool or Jacuzzi is included in the pool complex it should be designed to accommodate disabled users.
- Showers associated with these facilities should be located close by.

Surfaces

Floor finishes must be reliably slip resistant and this usually also results in them being more abrasive. Some disabled swimmers are particularly susceptible to skin damage, especially after being in the pool for a long time. It may be necessary for them to use slippers or a wheelchair over more abrasive flooring.

- The floor finish should be as easy to clean as possible and be regularly maintained with appropriate cleaning agents to remove surface pollutants in order that slip-resistance can be maintained.
- Wall surfaces should be free from projections and sharp corners and be non-abrasive, particularly where bare skin may be present.

Thermal Comfort

Some disabled people are particularly susceptible to the cold in a pool environment because they may have poor circulation and also because the

process of drying and changing can also take much longer. It is important that these factors are considered at design stage.

Consider the following:

- Avoid uncomfortable variations in temperature.
- Windows and doors should be detailed and located to avoid the creation of draughts and cold areas.
- Ventilation supply grilles should not create draughty conditions – even warm air can feel cold to a wet body.

If increased water and air temperatures are required for specific sessions with disabled swimmers, this should be taken into account at an early stage in the design process as it will have a significant effect on the design of the building's fabric and services.

The following are recommended water temperatures.

- | | |
|--------------------------------|------|
| • Competitive swimming | 27°C |
| • Recreational, adult teaching | 28°C |
| • Children teaching, leisure | 29°C |
| • Babies, disabled people | 30°C |

However, there are some severely disabled people for whom a higher temperature is required. This could be over 33°C. Where facilities are available, consideration should be given to providing sessions for people requiring the higher temperatures.



16.0 Sport-Specific Requirements

Boccia

Boccia is played indoors by throwing, kicking or using an assisting device to propel leather balls as close as possible to a small white ball that serves as a jack. Players may compete individually or as a team.

- A smooth, flat surface, such as a typical sports hall floor is required to a size of 12.5 x 6.0m.
- Good lighting is required.
- The space should not be located next to a noisy activity. Ideally a microphone should be available for use by the tutor.
- The court markings are normally temporary tape markings. Ideally, in special schools, the court markings should be permanent to reduce the set up time.
- Men and women compete together in all events.

Canoeing

This section should be read in conjunction with the section on sailing where generic issues of access to water sports facilities are covered. The specific requirements for canoeing are:

- Docking bays that give access from both sides of the canoe. These can be incorporated into the design of the landing stage.
- Docking bays should incorporate hoists and frames to assist people to get in and out of a canoe.
- The seat or sling used with the hoist should be comfortable – often the canoeist will remain in the sling while canoeing. Consider providing more than one sling or seat.
- The hoist should have enough reach to extend out over the craft from the landing stage.
- Transfer or sliding boards should be provided and adequate provision made for their secure and convenient storage.

Fitness Suite

All facilities providing services to the public need to be accessible to a wide range of disabled people. Information on aspects of disabled usage is contained within sections of this document. Reference should also be made to all existing



legislation and standards ⁸.

The 'Inclusive Fitness Initiative' ⁹ (IFI) is a valuable resource for information on accessibility, inclusive equipment (that can be used by both disabled and non-disabled people alike), staff training and inclusive marketing strategies.

The initiative can award the 'Inclusive Fitness Mark', which is a quality mark accreditation scheme based on the following;

- Facility Accessibility
- Fitness Equipment Specification
- Staff Training
- Marketing
- Policies and Procedures

⁸ See BS8300:2009 'Design of buildings and their approaches to meet the needs of disabled people – Code of Practice', Building Regulations - Approved Document M: 2004

⁹ See <http://www.inclusivefitness.org>

Sport England and the IFI has been working in partnership with a number of fitness equipment manufacturers for more than five years to ensure that the equipment available on the market is as inclusive as current technology and development will permit.

The lack of availability of accessible fitness equipment can no longer be used as an excuse for 'exclusive' fitness facilities. Furthermore it has been shown that if planned properly, the provision of inclusive fitness equipment does not lead to the need for additional investment or additional space. It simply ensures that your fitness gym is functional for more users than ever before.

The IFI has worked alongside the fitness industry to create an accredited list of fitness equipment. In the UK this accredited equipment list is the definitive guide to inclusive fitness equipment available. Accessible exercise equipment meeting the IFI's requirements has been given the IFI mark.

All fitness facilities in England should aim for full accessibility and IFI Mark accreditation increases the size of the market able to be targeted by a fitness suite. It should be the goal for all new and refurbished centres in the UK, regardless of sector, wishing to become more inclusive. IFI Accreditation may also be a condition of funding in some instances.

A standard paragraph for use in tender documentation is available from the IFI.

All fitness facilities in England should aim for full accessibility. IFI Mark accreditation should be the goal for all new and refurbished centres. The Mark is applicable to all fitness facilities regardless of sector and greatly increases the size of the market able to be targeted by a fitness suite.

IFI Mark accreditation should be considered by all fitness facilities in the UK wishing to become more inclusive and may be a condition of funding in some instances. It is applicable to all fitness facilities regardless of sector and greatly increases the size of the market able to be targeted by a fitness suite.

Equipment

The IFI requires the following for CV equipment:

For facilities aiming for Provisional Level IFI Mark Accreditation:

- 1 IFI accredited treadmill
- 1 IFI accredited upright or recumbent cycle
- 1 IFI accredited upper body ergometer

For facilities aiming for Registered Level IFI Mark Accreditation:

- Minimum 30% of all treadmills IFI accredited
- Minimum 30% of all upright and recumbent cycles IFI accredited
- 1 IFI accredited upper body ergometer

For facilities aiming for Excellent Level IFI Mark Accreditation:

- All treadmills IFI accredited
- All upright and recumbent cycles IFI accredited
- Minimum 1-2 IFI accredited upper body ergometer (depending on size of facility)
- Minimum 1 IFI accredited rowing machine and postural support seat

The IFI requires the following for resistance equipment:

For facilities aiming for Provisional Level IFI Mark Accreditation:

- 1 IFI accredited leg extension or leg press
- 1 IFI accredited leg curl
- 1 IFI accredited upper body multi-station (or equivalent pieces of IFI accredited upper body resistance equipment)
- Some small equipment (e.g. low weight dumbbells, dynabands etc.) available

For facilities aiming for Registered Level IFI Mark Accreditation:

Addition of IFI Approved:

- Small equipment pack.

For facilities aiming for Excellent Level IFI Mark Accreditation:

Addition of IFI accredited:

- High / low pulley
- Chest press
- Shoulder press
- Seated row

(Cardiovascular and resistance could be combined to condense space depending on the layout and other features included)

Reception Desk

A staffed reception desk located at the entrance to the fitness suite will provide reassurance to new users and provide an orientation point for users having difficulties or those with questions.

If a reception desk is provided within the fitness suite, ensure that this is split-level and is at a height accessible to a wheelchair user or people of short stature.

Screening Area

Provide a separate room that is accessible to wheelchair users for use in pre-exercise screening. This room should be available to users who require privacy e.g. for taking medication.

Flooring

The use of a different colour walkway on the main thoroughfares through the fitness suite can greatly assist users with a visual impairment or learning difficulty.

Floors should be slip resistant and be free of tripping hazards. Floors should not contain thick carpet which could impede the progress of wheelchair users.

Should stairs be located within the fitness suite, alternative provision to stairs must also be provided (i.e. lift)

Mirrors

Mirrors should be carefully located within the fitness suite, and use of logos / manifestation at eye level to avoid confusion. Locate them solely in the free weights area (for technique purposes). Do not locate mirrors behind treadmills as this can be confusing for visually impaired users.

If using mirrors within the fitness suite, the use of some logos/ manifestations at eye level to both seated and standing users to indicate their presence to visually impaired users. Try to avoid glare from lighting onto mirrors.

Equipment Provision

Previously it was the exception rather than the rule for equipment in fitness gyms to be usable by disabled people. In many cases accessible equipment was located in a 'special' room away from the main fitness area and/or staff were not adequately trained to supervise use by disabled people. It is now accepted that all fitness equipment rooms must be accessible to everyone and that the equipment and its layout must reflect this inclusive approach.

Refer to the IFI Accreditation Mark standards on page 68.

Equipment Layout

Cardiovascular and resistance equipment should be kept separate. In larger facilities though, it may be possible to have a separate "circuit" area containing one of each piece of accessible equipment to aid the user and provide a set sequence that is easy to follow.

A minimum of 1.0m transfer space (ideally 1.5m) should be provided around all inclusive equipment to allow access for wheelchair users. Where more than one piece of equipment of a certain model is provided, at least one should have a 1.0m space (ideally 1.5m) to allow access.

A storage area should be allocated for small equipment (such as dynabands, hand and ankle weights etc.) along with space provided for their use.

Plinths should not be installed. If they are unavoidable, ensure that they are ramped at regular intervals and the ramps provide access to all equipment types. The edges of the plinth must be protected and contrast in colour to the surrounding floor.

Refer to IFI Mark accreditation standards on pages 67 - 68.

Stretch Area

If stretch charts are provided on the adjacent wall area, they should be easy to understand. The charts should not be laminated or printed on glossy paper as this can make them more difficult to read for users with a visual impairment. An alternative to using these charts should be made available, either in alternative formats or through instruction from fitness suite staff.

An area allocated for stretching / mat work should be provided. Mats should be contrasted in colour to the floor to prevent a trip hazard.

Rest Area

A chair should be provided within the fitness suite for users requiring a rest.

Water and Paper Towels

A water fountain accessible to wheelchair users should be provided within the fitness suite.

As a minimum, free drinking water must be available to users on request.

Paper towel dispensers (if used) should be located at a height accessible to wheelchair users.

Assistive Hearing System

Hearing aid systems such as Induction loops should be available within the fitness suite to aid communication for people with hearing impairments, especially during inductions and personal training.

Air Conditioning

Variable air temperature through air conditioning may be beneficial to users with Multiple Sclerosis.

Entertainment

If music is played within the fitness suite this

should not be obtrusive or played at an excessive level. The volume of the music should be adjustable so that it can be lowered during inductions/sessions for hearing impaired users.

If cardio-theatre is available within the fitness suite, consider also activating the subtitle feature on televisions for those with a hearing impairment.

Printed Material

Programme cards, Par-Q forms etc. should be available to users in alternative formats. Any short-term notices e.g. informing users of a one-off early closure, should be produced in an accessible format as possible, and policies should also be implemented to ensure that disabled members are informed by staff of this. Include positive inclusive images within the fitness suite.

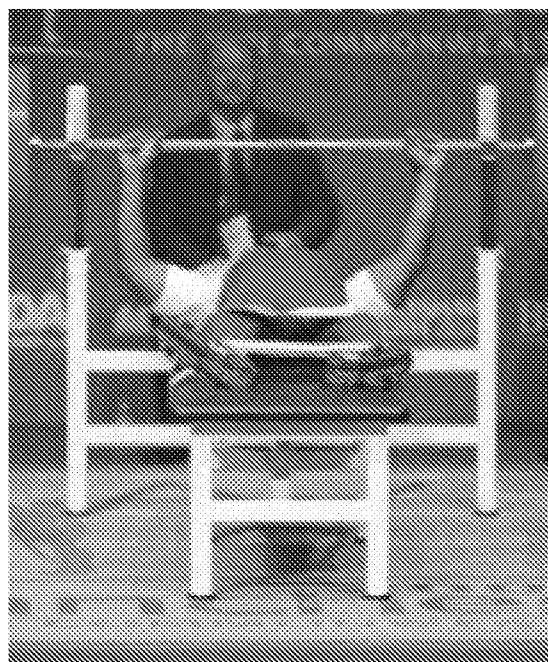


Goalball

Goalball is played by blind and partially sighted athletes. Each team has three players on the court at any one time and the object is to throw the ball into the opponents' goal. Bells inside the ball help to orient the players and indicate the direction of the oncoming ball. Therefore, while play is in progress the hall should be completely silent to allow the players to concentrate and react. All competitors wear masks whilst in play, allowing athletes with varying degrees of sight to participate together.

The court markings are normally of a temporary nature. For competitions all the court markings must be tactile but for less formal play only the orientation lines and the lines defining the team areas need to be tactile. The other lines should be visibly marked.

- The acoustic properties of the hall are critical to play. The hall should have a reverberation time not exceeding two seconds at mid-frequency, and should be designed and specified to avoid unnecessary background noise, for example from adjacent activities or equipment, or from nearby traffic.
- Tactile lines are formed by covering the builder's line or cord with 'Sportsline' or similar high-quality tape.
- The goals are 9.0m wide x 1.3m high and are usually made from sectional steel.



- The court size is 18.0m x 9.0m, the recommended minimum space is 21.0m x 30.0m with a clear height of 5.0m.
- The floor should have a smooth surface that allows the body to slide easily without jarring. See the Sport England guidance note 'Floors for Indoor Sports' and BS EN 14904.
- All wall surfaces should be flush with no projections or recesses.

Power-lifting

Additional space and/or convenient storage space should be provided for the specialist power-lifting bench.

Sailing

People with a wide range of disabilities enjoy sailing. The Royal Yachting Association's (RYA) Sailability programme promotes sailing as an ideal sport for disabled people. The key accessibility issues for sailing other than accommodation and management, which are common to all sports, are as follows:

Entrance gate

Sailing clubs often use security barriers or gates at the entrance to the facility. The design and management of the gate needs careful consideration so that it does not become a barrier to people who need to operate it. There is no easy solution but the problem can be reduced by

thoughtful management and by careful design including:

- Providing clear signs and contact numbers.
- Ensuring that the gate swings easily.
- Positioning controls and locks in easily accessible locations.

Car parking

Land is at a premium at marinas, particularly land close to the water. Wherever possible, however, dedicated accessible car parking spaces should be provided close to the clubhouse and moorings. Only where this is not possible is a drop-off point an acceptable alternative. An effective solution is the use of a golf buggy to convey disabled people from a 'remote' car park to the clubhouse and water. The buggies can also be used to move the dinghies around allowing improved access and added value.



Pontoons

- The main walkways should be at least 2m wide so that two wheelchairs can pass safely.
- Berthing pontoons should be rigid to avoid whiplash and a minimum of 1m wide between the cleats.
- At least one berthing pontoon, serving 5% of berths, should be fitted with a hoist and multiple sockets to allow full use of the pontoon.
- Pontoons should be finished with a non-slip surface.
- The junctions between sections of the pontoon should be flush.
- The edge of the pontoon should be a margin in contrasting colour. Cleats, service points, etc should be located within this margin.

Except where linking to a pontoon, the gradient of slopes should comply with the guidance provided earlier in this document.

In tidal situations and where it is unavoidable, safe access to pontoons may have to be restricted to times that suit the tide.

Ramps

- All ramps must be fitted with a slip-resistant surface. If slats are used across the ramp they must not be used for the whole width at right angles to the direction of travel to avoid creating a hazard for wheelchair users.
- All ramps should be fitted with handrails on both sides.
- Where it is not possible to gain access to the water using a suitable ramp, a proprietary lifting platform should be installed. Further details are available from RYA Sailability. It is important that such installations comply with all safety regulations and are properly maintained.

Slipways

- All slipways should be fitted with a winch system for the launch and recovery of boats.
- Slipways should be no steeper than 1 in 15.

Race hut

- The race hut should be accessible to everyone.

Shooting

- For shooting, the provision of convenient and secure storage for the shooting stands may be needed. These are often used as aids by some participants.



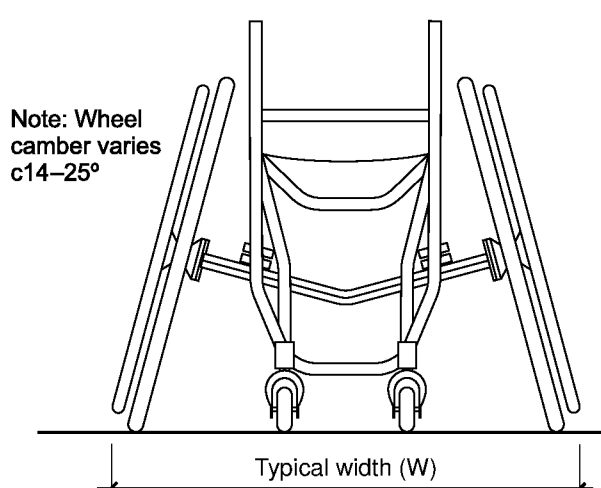
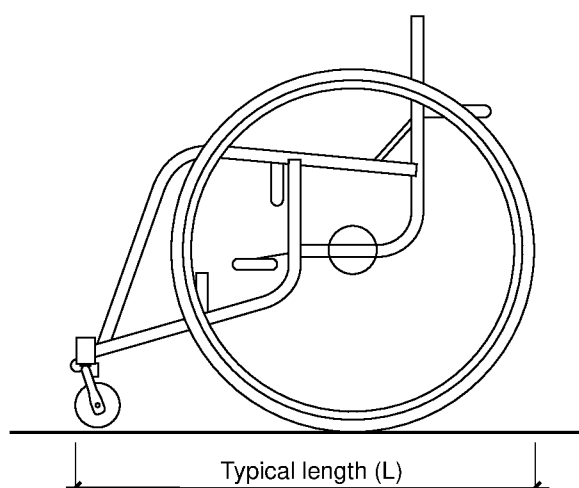
17.0 Wheelchair Sports

Wheelchair sports include athletics, badminton, basketball, bowls, fencing, rugby, table tennis and tennis. Wheelchair sports are developing very quickly. Many of them are fast moving and have developed specialist 'sports chairs'. These sports share many common facility issues:

- Some athletes find sitting in a sports chair for long periods uncomfortable and often only use the chairs during the sporting activity. It is therefore necessary to make provision for the secure storage of chairs while they are not in use to avoid them becoming a hazard.
- Sports wheelchairs are wider than wheelchairs used for everyday mobility. It is therefore necessary to ensure that lift car sizes are large enough to accommodate them, see Section 5.0 above and Tables 6 and 7.
- Specialist sports chairs can vary in width from 0.8m up to 1.2m depending on the seat width required for the individual and on the degree of wheel camber required, appropriate for the level of play.



The modern sportschair is purpose-built for the individual and the sport. Sportschairs are as highly engineered as other modern sports equipment



	Approximate length (L)	Approximate width (W)
Sportschairs generally	800	800 - 1200
Tennis chairs	850	1000
Racing chairs	1800	750

Note: These are approximate unoccupied sizes

Note: All dimensions are in millimetres

Table 12 Typical dimensions for sportschairs

Currently the majority of sports chairs are up to 0.85m in width and require a minimum effective clear door opening width of at least 0.875m and the larger chairs require a minimum clear effective width of 1.2m (see Table 5).

- When designing most sports facilities (see Table 5) the approach is to ensure that the majority of sports chair users can access any part of the building when they are using their sports chair and therefore it is essential that they should only have to negotiate/open a single door with a clear effective width of 0.875m i.e. they do not have to open 2 doors at the same time to pass through.
- There will be people who use sports chairs over 0.85m wide and the design approach is to consider the large sports chair as a piece of sports equipment and therefore the user will not be using it in all areas of the sports facility and a 'sports chair' zone needs to be defined and agreed with key stakeholders (see page 9).

The 'sports chair' zone will provide door openings that can achieve at least a 1.2m clear effective width and appropriately designed circulation spaces (see Figure 7)

- In most cases the 'sports chair' zone will be limited to the areas required to enter the building and use the specific sports facility. It is likely that in most cases the 'sports chair' zone will not include the changing and toilet provision. However, the extent of access for the larger sports chairs to individual or team changing and toilet facilities needs to be decided at the briefing stage for the project.



- Barriers, fencing and balustrades must be designed so that they do not obscure play for spectators who are wheelchair users.
- Floodlight meters/controls should be located within reach at an accessible height.
- There should be no hazardous projections into the playing area.

Athletics (indoor and outdoor)

- All sports surfaces, including synthetic track and field surfaces, must be designed and installed to meet the needs of disabled athletes and particularly those who are wheelchair users. This includes warm-up and warm-down areas. The sports surfaces should be well illuminated and have defined colours and textures to aid athletes with visual impairment.
- All athletics facilities, indoor and outdoor, should be fully accessible.
- Adequate, secure and convenient storage must be provided for sports chairs and wheelchairs.
- Where necessary provide removable kerbing for the track edge to allow access for wheelchair users and equipment.
- Ensure that sufficient space for access is provided around the track.
- The facility should include designated areas where technicians, competitors and coaches can repair and maintain sports chairs, other mechanical sports aids, equipment and prostheses etc.
- Racing chairs can be up to 2.0m long and manoeuvring space must be allowed for.
- Provide anchorage points in throwing areas to secure throwing frames. Ensure that there is convenient storage for throwing frames.



Badminton

Wheelchair badminton is played in accordance with the rules of the parent game except for a modification to the overall playing area. This is based around the standard badminton court with modifications to suit the particular disability of the people playing.

Basketball

Wheelchair basketball is one of the oldest wheelchair sports and, like its parent sport, is very vigorous and fast moving. It is played on a full-size basketball court and it is essential that the minimum margins around the court are maintained for the safety of the players and, where appropriate, spectators.

- Wall-mounted baskets should not be used.
- Mobile supports should have a cantilevered arm that maintains the overrun distance.
- In large venues designed for major competitions provide four team-changing rooms, each with two fully equipped accessible toilets. These venues must also provide wider corridors to allow two wheelchairs to pass.
- Wooden floor surfaces give the fastest game. Cushioned floors do not provide a suitable surface for wheelchair basketball as they significantly reduce the mobility of the sports chair. See the Sport England guidance note 'Floors for Indoor Sports' and BS EN 14904.

Bowls

Bowls can be played both indoors and outdoors with all players on equal terms. The two key issues are ensuring that access to the green is available for people in wheelchairs and ensuring that the playing surface is not damaged.

Access to the green

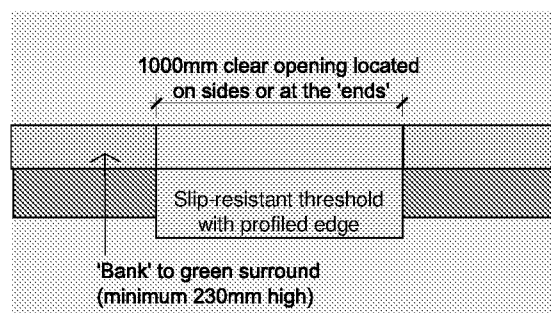
Safe and convenient access to the green must be provided. This can be achieved in two ways:

- The green should incorporate an edge detail that can be manually adjusted to bridge the ditch and provide a smooth transition onto the green for disabled people. This type of arrangement should always be available for indoor facilities.
- Outdoors, where it may not be practicable to provide an appropriate edge detail, a proprietary lightweight set of movable ramps should be provided to give direct access to the green. Provision should be made for the convenient and safe storage of these ramps when not in use.

Protecting the playing surface

To protect the playing surface special approved wheelchairs or buggies with wider wheels than the standard are used. Some players will have their own buggy but many will not. Players can also purchase clip-on wheels for use with their personal wheelchair while on the green.

- Management should provide two sizes of buggy.
- Provision should be made for the secure and convenient storage of bowls buggies and players' wheelchairs. Note that these buggies require a clear width of 0.875m, therefore door widths should be appropriately sized to allow such access through a single door leaf.



Plan

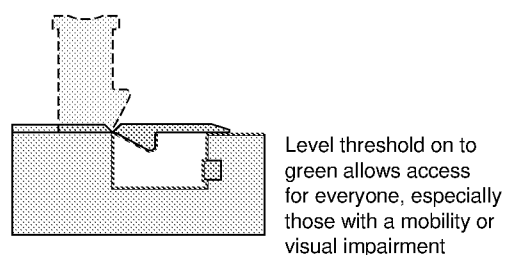
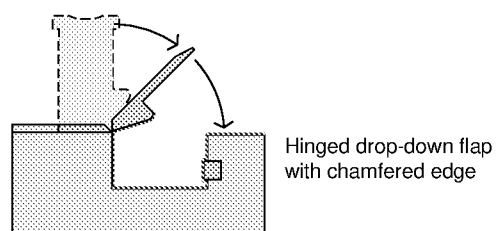
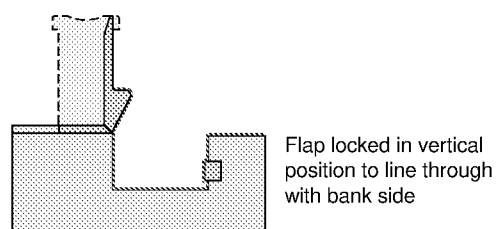


Figure 30 Typical sections through side or end ditch

Cricket

Wheelchair cricket is played indoors and outdoors. Teams of 6–11 players compete using the same rules as the parent sport. Indoors the game is played in a sports hall or cricket school. The minimum space required is a netted area of two lanes, although a larger space is preferred.

- All indoor cricket schools should make provision for wheelchair cricket.
- Ensure that the minimum circulation widths are maintained. Particular care should be taken to

ensure that net supports and fixings do not impinge on the circulation areas.

- Ensure that wheelchair users can gain access to the cricket net areas.

Fencing

There are no special requirements for wheelchair fencing apart from special frames that are used to secure the chairs in the correct relationship. The building design should ensure that:

- There is adequate secure storage provision immediately adjacent.
- Appropriately placed power supply points are available (minimum four double sockets).

Rugby

Wheelchair rugby – played in 20 countries – is a team sport for people with paraplegia and people with upper limb impairment.

The sport is played with a volleyball on a standard basketball court with goals and key areas marked out at both ends. The object of the game is to score by carrying the ball over your opponent's line. Most chair-to-chair contact is allowed, but not body contact.

Table Tennis

Table tennis is one of the sports that wheelchair users can play competitively against non-disabled opponents and many wheelchair users are members of table tennis clubs.

- Only tables that are free from obstructing cross-members should be used.
- Ensure that the proposed layout of tables/screens and netting does not hinder access between tables.
- To compensate for being seated while playing some wheelchair users use a higher than normal chair.

Tennis

Wheelchair tennis is one of the fastest growing sports for disabled people and is played in over 70 countries throughout the world. It provides the opportunity for disabled people to enjoy tennis both recreationally and / or competitively against non-disabled and disabled people of all ages.

Wheelchair tennis is played according to the rules of the parent sport except that the ball is allowed to bounce twice. Facility requirements (indoor and outdoor):



- Standard tennis court – most surfaces are suitable.
- Tennis wheelchairs can require up to 1.2m clear width along route ways.

The following are appropriate surfaces for wheelchair use:

- Acrylic – considered to be the best surface.
- Macadam.
- Clay – not new courts.
- Carpet.
- Some artificial grass surfaces – but these are generally unpopular with players because they are considered to be 'hard work'.

As a minimum provision, a facility with more than five courts should have at least two acrylic or macadam courts. When setting out new courts, allow for the maximum run back recommended by the Lawn Tennis Association. It is essential that adequate access be provided. This includes:

- Providing access around the court to change ends easily.
- Ensuring that the net posts on adjacent courts are not too close together for sports chair users to pass.
- Ensuring that floodlighting columns do not restrict the minimum width required.

18.0 Access In The Countryside

Projects aimed at making the countryside more accessible to disabled people must start with the general principles already outlined in this document. The designer should try to make the facility as convenient and safe as possible for all users. The key requirements are:

- Firm, even walking surfaces that do not become soft or slippery when wet.
- Easy ramps and steps.
- Handrails and grab rails at hazardous locations.
- Paths and gates that are wide enough for wheelchair users.
- WCs within easy reach.
- Clear signposting.
- Tactile direction signs.
- Auditory aids (public address and induction loops).

Close attention should be paid to:

- Alighting from and parking a bus.
- Finding and using a WC.
- Finding and approaching the entrance.
- Buying a ticket.
- Passing through/around a turnstile.
- Getting to the destination.

The designer should consider how all of these events will impact on a disabled user, and then make the necessary adjustments. See the Fieldfare Trust 'Countryside for All' Project. (www.fieldfare.org.uk)



19.0 Conclusion

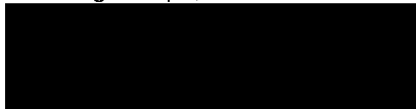
As stated in the introduction, this guidance is not about 'special provision' or what a disabled person cannot do because of an impairment or a medical condition. This document is written from the view that it is the design or management of a facility that creates the barriers and limitations to use by disabled people. Everyone is entitled to equal opportunities to participate in sport, and to do so in high quality facilities that are attractive, well designed and properly managed.

By following the minimum requirements set out in this guidance note and the others in the series, inclusive design can be achieved that will benefit everyone. As well as being equitable, it makes financial sense to attract rather than discourage all potential customers, together with their friends and families, to use sports facilities. Sports facilities should be available for everyone to use.

19.0 Contact Addresses

British Blind Sport

Pure Offices, Plato Close, Tachbrook Park
Leamington Spa, Warwickshire CV34 6WE



British Disabled Fencing Association

32 Devonshire Way, Croydon, Surrey
CR0 8BR



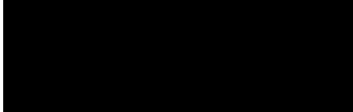
British Disabled Water Ski Association

The Tony Edge National Centre, Heron Lake, Hythe
End Road, Wraysbury, Nr Staines TW19 6HW



British Paralympic Association

60 Charlotte Street, London W1T 2NU



British Wheelchair Sports Foundation

WheelPower, Stoke Mandeville Stadium,
Guttmann Road, Stoke Mandeville,
Buckinghamshire HP21 9PP



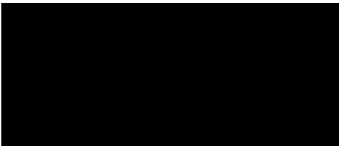
Centre for Accessible Environments

Centre for Accessible Environments and the
Access Lab
70 South Lambeth Road
London SW8 1RL



English Federation of Disability Sport

Manchester Metropolitan University, Alsager
Campus, Hassall Road, Alsager, Stoke-on-Trent
ST7 2HL



Equality and Human Rights Commission

3 More London, Riverside Tooley Street, London
SE1 2RG



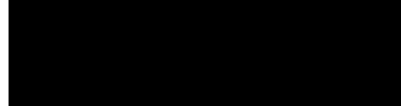
Great Britain Boccia Federation

GB Boccia Federation c/o ParalympicsGB
60 Charlotte Street, London W1T 2NU



Guide Dogs for the Blind Association

Burghfield Common, Reading RG7 3YG



Inclusive Fitness Initiative

MLS Ltd., 4 Park Square, Newton Chambers Road,
Thornccliffe Park, Chapelton, Sheffield, S35 2PH



JMU Access Partnership

Joint Mobility Unit, 105 Judd Street, London,
WC1H 9NE



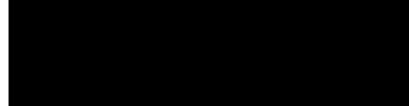
RADAR – the Disability Network

12 City Forum, 250 City Road,
London EC1V 8AF



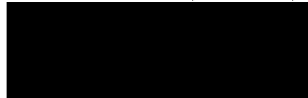
Riding for the Disabled Association

Norfolk House, 1a Tournament Court, Edgehill
Drive, Warwick CV34 6LG



Royal National Institute of Blind People

105 Judd Street, London, WC1H 9NE

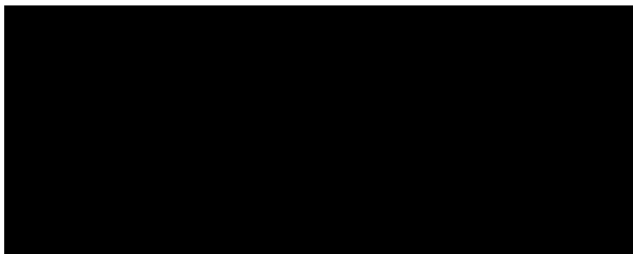


Royal National Institute for Deaf People
19–23 Featherstone Street, London EC1Y 8SL



The Sign Design Society

The Sign Design Society, 5 Longton Grove,
Sydenham, London SE26 6QQ
Tel: 020 8776 8866
Fax: 0871 900 3160





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Information Prepared By:

Sport England, Brian Towers and S&P Architects

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Della Batchelor
Alan Edwards
Charlie Fawell
Eileen Langsley
Robynne Limoges

David Slater
Richard Sowersby
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Charlotte Wood

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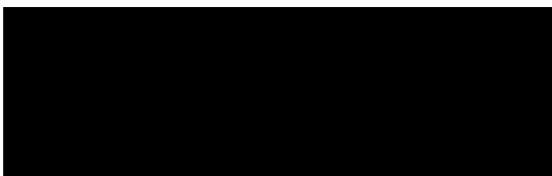
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Sport England

3rd Floor Victoria House
Bloomsbury Square
London
WC1B 4SE



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