Right Directions
Quality Support in Safe Hands

March 2023

Football, Hockey, Rugby Netball goalpost safety (Indoor and Outdoor)

Area: Dry Activities **Category:** Operations

Introduction

This guidance note provides an overview of the operation of goalposts. Fatal accidents have happened involving goalposts. The purpose in publishing this guide is to help prevent accidents by outlining what needs to be done to make sure that goals are safe. When installed and used in the right way, a goal that was built according to the correct safety instructions and maintained should not cause any injury.

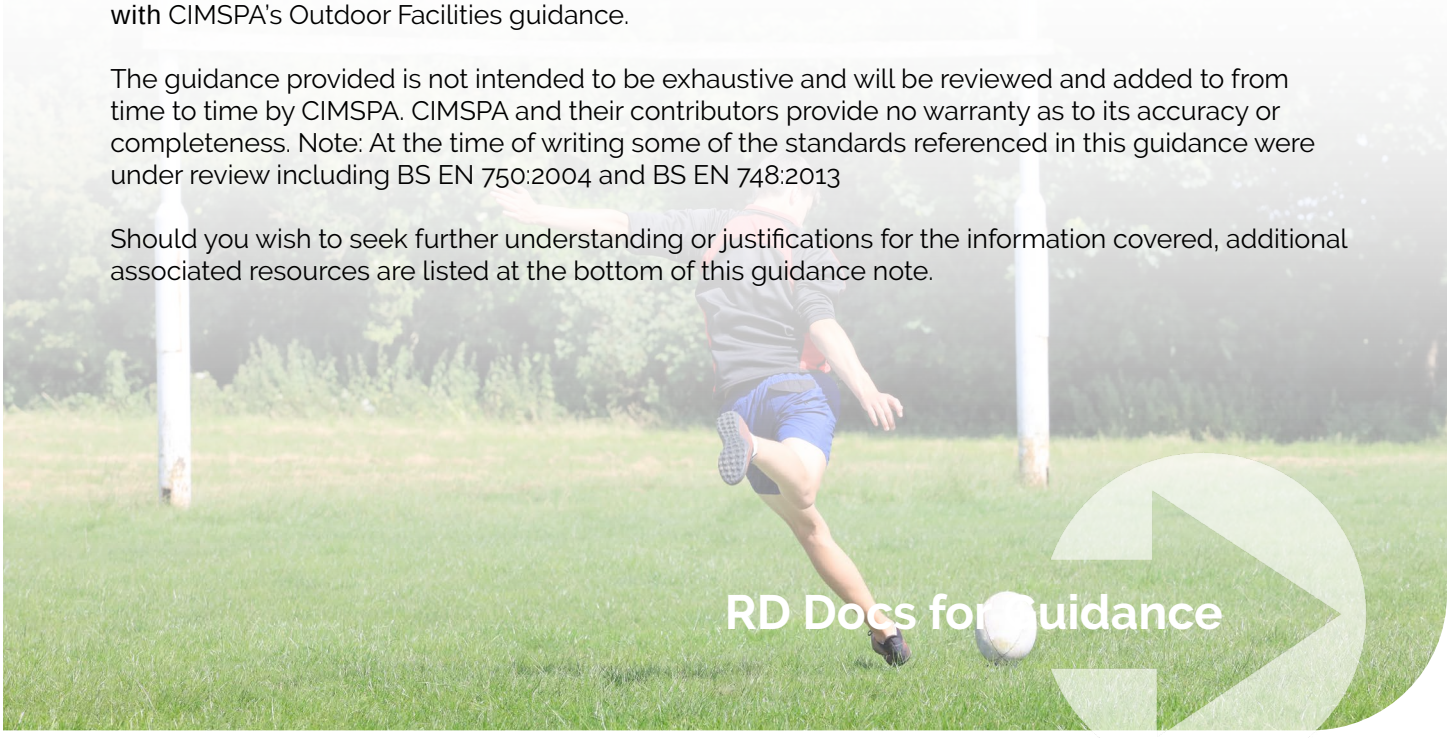
How to use the guidance notes

Operators have a legal requirement to manage health and safety. Employers must protect the 'health, safety and welfare' at work of all their employees, as well as others on their premises. This guide has been produced to help operators do this.

The guidance brings together good practice from a variety of sources, including the Football Association (FA) guidance on goalposts, and summarises the content of 'BS EN 748, Playing field equipment - Football Goals - Functional and safety requirements, test methods', BS EN 750 Playing field equipment, Hockey goals, Functional and safety requirements, test methods', and 'BS EN16579 Playing field equipment, Portable and permanent socketed goals, Functional, safety requirements and test methods.'
This guidance can be used when developing risk assessments, policies, procedures (including normal operating procedures and identifying training requirements). It should be used in conjuction with CIMSPA's Outdoor Facilities guidance.

The guidance provided is not intended to be exhaustive and will be reviewed and added to from time to time by CIMSPA. CIMSPA and their contributors provide no warranty as to its accuracy or completeness. Note: At the time of writing some of the standards referenced in this guidance were under review including BS EN 750:2004 and BS EN 748:2013

Should you wish to seek further understanding or justifications for the information covered, additional associated resources are listed at the bottom of this guidance note.



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This guidance note covers:

- Hazards and risks
- Safe set up
  - Procurement and design of goalposts
  - Installation and set up
- Operational standards
  - Moving goals
  - Storing goalposts
- Maintenance, checks and inspection
- Supervision and training
  - Staff training

Hazards and risks

There are three important aspects of a goal's design and construction which are potential dangers and where accidents have happened:

- **How the net is fixed to the frame of the goal. Metal hook fixings have caused serious injuries, including amputations, deep penetrative wounds and injuries involving trapping parts of the body (fingers, head, and so on).**
- **The net itself. A net can cause cuts and trap parts of the body if the mesh size is too large, or the cord is too thin.**
- **The goal frame. Serious impact and crushing injuries have been caused by goals which have fallen over or collapsed, either as a result of poor design, maintenance, modification of the goal or through poor installation.**

Providers of goal frames should carry out a risk assessment that covers circumstances in which the frames are used and the arrangements for preventing overturning. This should take into account not only the use for which the frames were designed, but also any foreseeable misuse (e.g. people swinging from the crossbars).

Safe set up

Procurement and design of goalposts

Football, rugby, netball and tennis posts/goals, nets and fittings for use should conform to BS EN 16579 and should be purchased as a complete unit (e.g. goal, net, anchors, chains, etc. together with any other accessories that may be needed). Hockey goals must conform to BS EN 750. Large football goals must conform to BS EN 748.

Modified or home-made goals or domestic quality equipment should not be used. This includes not using wooden goalposts. The use of metal cup hooks on any part of a goal frame was banned from the commencement of football season 2007-2008.
The manufacturer should provide written instructions for users and mark the goals with a warning label, including essential instructions.

EN16579 replaces 'BS 8461 Football goals, Code of practice for their procurement, installation, maintenance, storage and inspection', and 'BS 8462 Goals for youth football, futsal, mini-soccer and small-sided football' - Specification. There is no need for facility owners and operators to replace their existing goalposts until they reach the end of their lifespan, providing that the usual, regular inspections are carried out. The changes relate to design and testing of goalposts before entering the market, and therefore do not affect operators.

Installation and set up

Goals should always be installed in accordance with the manufacturer's instructions. Installation should only be undertaken by, or under the direct supervision of, trained persons with enough experience and with adequate assistance for the size of the goal being erected.

BSI recommends a warning sign is placed near every pitch regarding goalpost safety. The sign should summarise the dangers of not installing, securing or using goals correctly.

Football goals

All socket type goals should be cemented into the ground. Always install as per manufacturer's instructions to determine dimensions of concrete and ensure a minimum cube of 600mm x 600mm. Free-standing goals should be correctly anchored, either by suitable weights or cable and chain attachments. Manufacturer's instructions should be followed.

Free-standing goals, including indoor goals are only safe if they are properly stabilised. Most of the commonly used methods of stabilisation can be affected by poor installation techniques as well as by poor ground conditions. For this reason, the most reliable methods of stabilising free-standing goals are:

- Attaching the back bar of the support frame to permanent fixing points, for instance: eyebolts, stainless-steel loops set in concrete blocks in the correct position or suitable attachment points on a permanent fence or wall.
- Using adequate weights attached to the back bar of the support frame in the correct positions specified by the manufacturer

The use of pins, u-staples or screw-in anchors on natural turf pitches is generally not recommended as these types of fixings may provide inadequate stability on some types of ground or under certain weather conditions. They should be used only if there is evidence that they are effective under the worst possible predictable ground conditions on the site in question.

In all circumstances, any equipment used to stabilise goals should be kept away from the immediate playing area to protect players and officials.

Hockey Goals

Ensure the goals are assembled as per manufacturer's installation instructions. If used on grass, it is essential that two heavy-duty grass ground anchors are installed per goal. These anchors come complete with chains and clips for attachment to the back rails. It is imperative that the ground anchors are correctly installed in the ground at the angle recommended and tested as below for safety prior to use.
If used on a synthetic pitch, the goals must be suitably anchored to conform to BS EN 750. This can be achieved by either:

- Installing a ground anchor below the synthetic grass level
- By attaching the goal to the nearest perimeter fixing point. A chain or flat bar can be used to achieve this, but care should be taken so as not to create another potential hazard when installing this option.
- Attaching counterbalance weights (175kg in total or 10 ANC-005 anchors) to the back of each goal.

Care must be taken to ensure any anchors are correctly installed on the goals as recommended in manufacturer's instructions and always test as below for safety prior to use.

Always test goal anchorage as follows:

- **Exert a downward pressure on the crossbar**
- **Exert a forward pressure on both upright posts**

If the posts fail to remain secure, check the installation of the anchors. It may be necessary to use additional anchors. Once these have been fitted, apply the above tests again.

Nets need to be a maximum 45mm square mesh to conform to BS EN 750. However, the vast majority of nets supplied are 50mm square mesh which is the usual standard supplied to the UK market. These will not conform to the standard requirements.

The nets should be the same colour as the field of play and fixed so that the ball does not pass between the goalposts and the net or between the crossbar and the net. The nets shall be fixed at the back of the sideboards and backboards so that the ball cannot pass beyond the net.

Rugby goals

Ensure the correct amount of concrete is in place for the sockets before assembling posts. Please refer to the product assembly instructions to find the amount of concrete required.
Allow a minimum of three people to allow safe erection of all rugby posts.
Always erect one upright at a time and ensure the crossbar is removed before taking the posts down.

Hinged rugby posts can be used with a rugby lifter and small tractor to ensure quick and safe erection. This allows for maintenance to be easily carried out mid-season if required.
Socketed rugby posts are erected by inserting them into a socket in the ground which has been securely cemented in place. Due to the nature of socketed rugby posts, they are more difficult to put up and take down than hinged posts, therefore, maintenance is best carried out at the end of season.

Operational standards

Moving goals

Goals may be at their most dangerous when they are being moved. Under these circumstances, most types of goal are detached from any anchors, weights, fixing points or sockets and are therefore unstable.

Football Goals

Goals should never be moved without an adequate number of physically fit and capable people who have been fully trained to use proper lifting techniques. A full-sized goal should never be moved using fewer than four adults.

Manufacturer's instructions on moving goals should always be followed. Goals should never be dragged across the ground as this may damage the goal and/or the playing surface. If wheels are fitted to the goal, they should be used correctly, in accordance with the manufacturer's instructions. Wheels should be of a type suitable for the surface across which the goal is to be moved.

Goals fitted with four wheels can easily topple if they are pushed in the wrong direction and should only be moved by pushing them uprights via a backwards direction. Goals with two wheels should be moved by lifting the back bar and pulling in a backwards direction. If the ground is soft, wheeled goals should be lifted.

Hockey goals

It is recommended that wheels are used to transport hockey goals, otherwise the goals should only be lifted with a minimum of four competent persons.

Only devices specified by the manufacturer must be used to manoeuvre goals.
Hockey goals with rear fitted wheels must be tipped onto the wheels using four competent persons. There should be one person in each corner of the goal. The top rear support bars and side frames are integral parts of the goal for supporting the netting and are not to be used as the principal method for tipping the goal.

When using front flip-over type wheels, the lifting handles fitted to the goal are to be used when flipping the wheel into place. This requires two people per side (one to lift, one to flip).
In the case of integrally weighted goals, four competent persons are required to move the goal. Standing directly behind the goal, put one foot on the axle bar to stabilise the goal and at the same time pull the goal back together until the goal is in position. Manoeuvre the goal into the desired location and carefully let the goal down, making sure that the goal is not dropped.
Integrally weighted goals require a minimum pitch run off of two metres and must not be stored with the back of the goal against a surrounding fence or wall. To ensure the goal can be moved, space must be available to allow the goals to be tipped up onto their roller.

Rugby goals

Rugby posts are best and most easily moved with the aid of the rugby storage trolley. The trolley is designed to transport and store all the components required for half a set of posts. This means two trolleys will be required for one full set of posts.

Netball

Freestanding posts must only be wheeled in a pushing motion from the top of the post.

Storing Goalposts

Football goals

Goals not in use should be properly stored. Stored goals should never be left accessible, upright or unstable. Socketed and folded free-standing goals should not be left leaning or unsecured, rather they should be locked securely and safely. If this is not possible, they should be left lying flat on the ground so they cannot fall over.

Portable goalposts should be either dismantled and removed to a place of secure storage, or placed together and suitable fixings applied to prevent unauthorised use at any time. This includes indoor goals where it is common for them to be secured against a wall to prevent unauthorised use or prevent them falling over.

Large movable goals may be left safely by chaining them face to face in pairs or putting them in securable enclosures. If no method is available to store goals safely, it is safer to leave them in place and properly stabilised as if in use.

FA requires a 3m uninterrupted run-off on all sides and recommends that goal storage is dealt with by creating an inset in the perimeter.

Hockey goals

If the pitch is accessible when unsupervised, it is recommended that goals are removed from the playing area and either stored away or secured to the nearest fence to ensure they are safe. They should be stored clear of the minimum run off area from the field of play.

Individual risk assessments should be conducted for local conditions, and governing body guidance should be consulted. The minimum standard is 3m behind and 2m to the side, however as bigger area as possible is recommended. Sport England (SE) Design Guide provides for the design of larger run-off areas (5m and 4m). There are a number of sample MUGA layouts from SE which show a clearance of 7.5m.

Rugby goals

If possible, remove and store posts between matches, but posts are normally left erected for the season. Storage should follow the same principles as football.

Netball

Freestanding posts must be laid down and stored in a secure covered location when not in use.

Maintenance, checks and inspection

Goals should be inspected regularly to ensure that they are still safe to be used. It is not possible to specify exactly what checks should be made or at what intervals, because the conditions under which goals are kept and used vary so widely. It may be necessary to check a goal which is permanently installed in an open public space every day, while one which is in a locked, fenced enclosure and is only ever used by an organised club at a high level with supervision may need to be checked relatively infrequently.

The type and thoroughness of the required checks may also vary with the type of goal. The guidance from BSI identifies three levels of inspection: a weekly (as minimum), or common-sense check (type one); an inspection each time the goal is re-positioned (type two); and the annual strength and stability check (type three). Type three requires specialist equipment to conduct the check. This has to be conducted in accordance with the principles of BSEN 748 or BS EN16579. The following should be used as a guide to completing the checks:

Inspection type 1

Undertaken at least every week, and before any game or training activity.
Undertake a thorough visual check of the whole goal and check for the following:

- loose and missing nuts, bolts, pins and other fixings;
- firm attachment to anchoring points or signs of movement in sockets;
- if there are any wall or floor plates that they are securely fixed in place and/or weights have not been removed or tampered with.
- broken or missing net fixings;
- any broken cord in the nets;
- bent sections or other damage to any part of the goal;
- that all identification and instruction labels are firmly attached and fully legible.

Inspection type 2

Undertaken each time a goal is repositioned.
Undertake all the checks listed under inspection type 1 and:

- **check that the goal has been firmly reattached to all of its anchors;**
- **check that the anchors are secure;**
- **if weights are used, ensure that they are all present. The manufacturer's label on the goal should say what weight is needed to stabilise it;**
- **check that the goal has not been bent or otherwise damaged whilst being moved.**

Inspection type 3

Undertaken once every twelve months ideally prior to the start of every season.
Undertake all the checks listed under inspection types 1 and 2 and the following:

- **check (every goal) for strength and stability, in accordance with BS EN 748 or BS EN16579, as appropriate. Due to the specialist equipment required this is normally completed by an external competent contractor.**
- **A goal's strength or stability should never be tested by hanging or swinging from the crossbar.**

Each goal requires an identity label and a log book for purchase and maintenance history.

If a goal is found to be damaged, or if faults are found during an inspection, the goal should be withdrawn from service until the defect is made good. Goals should not be modified or repaired by welding or by substituting incorrect parts. No repair should be made that changes the structural integrity, design or shape of the goal.

Replacement items for a goal should always be purchased from the original manufacturer or supplier and it is important to ensure that the combination of goal and new components will continue to conform to BS EN 748 or BS 8462, as appropriate.

Supervision and training

It is essential that staff are trained to recognise the potential dangers caused by goalposts. This should be included in induction training and reinforced periodically.

Training should be included for instructors, coaches, grounds maintenance operatives and staff leading activity sessions, as well as recreation attendants.

All coaches and recreation assistants should be suitably trained through qualifications aligned to the CIMSPA professional standards.

Useful Resources

The FA guide to pitch and goalpost dimensions (including line marking)
https://www.thefa.com/-/media/cfa/middlesexfa/files/leagues-and-clubs/fa-guide-to-pitch-and-goalpost-dimensions.ashx

The Football Association - Goals for football Guidance notes.
www.thefa.com/-/media/files/pdf/get-involved/fa-goalpost-guidance-august-2010.ashx

FIH Hockey Field Specifications
http://www.fih.ch/media/12500213/hockey-field-specifications-hockey-series-finals.pdf

BS EN 748, Playing field equipment - Football Goals - Functional and safety requirements, test methods.
https://shop.bsigroup.com/

BSEN16579., Playing field equipment. Portable and permanent socketed goals. Functional, safety requirements and test methods.
https://shop.bsigroup.com/

BS EN 750 Playing field equipment. Hockey goals. Functional and safety requirements, test methods
https://shop.bsigroup.com/

These guidance notes have been produced by Right Directions in partnership with CIMSPA.
For more information on goalpost safety or any other topics, please email Right Directions: info@rightdirections.co.uk or give us a call for a chat: **(01582) 840098**

RD Docs for Guidance