

Guide to Safety at Sports Grounds

Supplementary Guidance 01: Safe standing in seated areas

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Contents

	Foreword	4
SG01 1.0	Introduction to Supplementary Guidance	5
SG01 1.1	Who should read this Supplementary Guidance?	5
SG01 1.2	Safe standing in seated areas at sports grounds	5
SG01 1.3	Persistent standing in seated areas at sports grounds	6
SG01 1.4	Persistent standing and safety	6
SG01 1.5	Persistent standing and customer care	8
SG01 1.6	Management responsibility	8
SG01 1.7	Status of Supplementary Guidance	9
SG01 2.0	Management and design factors	10
SG01 2.1	How to use this Supplementary Guidance	10
SG01 2.2	Safe standing in seated areas – management considerations	10
SG01 2.3	Safe standing in seated areas – design factors	11
SG01 2.4	Safe standing in seated areas – safety management factors	22
SG01 2.5	(P) and (S) factors for safe standing areas in seated accommodation	24
Annex SG01 A	(P) factor indicative questions for seated areas used for safe standing	25
Annex SG01 B	(S) factor indicative questions for seated areas used for safe standing	27
	References	30

List of figures

Figure SG01 1	Sightlines for spectators standing in seated areas	14
Figure SG01 2	Seats with independent barriers	15
Figure SG01 3	Seats incorporating barriers	16
Figure SG01 4	Effects of lateral movement of spectators standing in seated areas	18



Foreword

Since its first appearance in the UK in 1973, the *Guide to Safety at Sports Grounds* (also referred to as the *Green Guide*) has evolved and expanded to become a leading and respected source of guidance for those involved in the design and safe management of sports grounds.

Published by the Sports Grounds Safety Authority (SGSA) in October 2018, the most recent, sixth edition is now the most comprehensive and widely used publication of its kind in the world, providing a wealth of definitive guidance on best practice.

Nevertheless, sports ground design and safety management procedures are forever advancing and responding to change. It is for this reason that the SGSA has drawn up this *Supplementary Guidance*, specifically to assist the management of sports grounds where the provision of safe standing for spectators in seated areas is being considered.

This *Supplementary Guidance* comes in response both to research commissioned by the SGSA (see [References](#)) into the effects of persistent standing at all-seated sports grounds and the development of engineering solutions that seek to ameliorate those effects. In the UK it also responds to a commitment made by the Government in 2019 to work with fans and football clubs towards introducing safe standing in seated areas.

In particular this *Supplementary Guidance* highlights the positive benefits of installing either independent barriers (or rails) or seats incorporating barriers in order to mitigate the risks of progressive crowd collapse. It also summarises the main design and safety management issues associated with such installations.

As such, the advice that follows should be applicable at a variety of sports grounds around the world.

Martyn Henderson
Chief Executive
Sports Grounds Safety Authority

SG01 1.0 Introduction to Supplementary Guidance

SG01 1.1 Who should read this Supplementary Guidance?

This document forms a supplement to the sixth edition of the *Guide to Safety at Sports Grounds* (the *Green Guide*), published in 2018, and more specifically to Chapter 12 Spectator Accommodation – Seating, with particular reference to Sections 12.19–12.25 of the *Green Guide*.

It has been drawn up to assist the management of sports grounds where the provision of safe standing for spectators in seated areas is being considered.

In common with the *Green Guide*, this *Supplementary Guidance* is an advisory document for use by competent persons working in the regulation and licensing, the design and planning, and the safety management and operation of sports grounds. For a definition of ‘competent’ see the Glossary in the *Green Guide*.

It is emphasised that for those sports grounds in England and Wales which, under the terms of the Football Spectators Act 1989, require a licence from the Sports Grounds Safety Authority (SGSA) in order to admit spectators to designated football matches, *additional compliance requirements* will be necessary to allow safe standing in seated areas.

For a definition of ‘designated football matches’ under the 1989 Act, and for details of the additional compliance requirements, please refer to the licensing section of the [SGSA website](#).

SG01 1.2 Safe standing in seated areas at sports grounds

Safe standing in seated areas, it should be noted, is distinct both from persistent standing in seated areas (see next section), and from safe standing in conventional terraced standing accommodation (see Chapter 13 of the *Green Guide*).

Standing in a seated area may be considered safe when each of the following conditions are met:

- a. standing spectators are protected from the risks of forward movement by the installation of suitably designed independent barriers in front of each seat, or by the provision of a suitably designed seats that incorporates barriers
- b. the design of each seat and seating row allows for free flowing lateral movement into and out of the seating row



- c. safety management procedures are in place to mitigate against encroachment onto the gangways
- d. safety management procedures are in place to manage the numbers of spectators entering the safe standing accommodation
- e. safety management procedures are in place to manage the behaviour of spectators.

Advice on how to achieve these conditions follows in **Chapter SG01 2.0**.

SG01 1.3 Persistent standing in seated areas at sports grounds

This *Supplementary Guidance* stems from a recognition that, at some sports grounds, and at some events, a number of spectators stand persistently in seated areas, and that this practice has significant safety implications.

Persistent standing, it is emphasised, is when spectators in a seated area stand for prolonged periods throughout an event, rather than stand intermittently or for brief periods in response to moments of excitement (for example when a goal is scored).

There are various reasons why spectators stand persistently in seated areas.

Some stand persistently for involuntary reasons; that is, because the sightlines are inadequate, because their views are blocked by physical obstructions, or because the seats are uncomfortable. Or they stand because other spectators in front are standing, whether for involuntary reasons or deliberately, and therefore they too must stand in order to view the pitch or area of activity.

Those who stand persistently and deliberately may themselves have different reasons. They may be copying the actions of the rival team's supporters. They may wish to demonstrate more visibly their support for their team, or they may be actively seeking to challenge authority. Or they may simply be demonstrating a preference to stand.

SG01 1.4 Persistent standing and safety

Conventional areas of seating are simply not designed to be safe for persistent standing, for the following reasons:

a. Forward movement and barriers

(See Sections 11.8, 12.10 and Chapter 13 of the *Green Guide*.)

As detailed in Chapter 13 of the *Green Guide*, terraces provided specifically for standing spectators should:

- i. be designed with a gradient, or rake, of no greater than 25 degrees (see also Section 11.8 of the *Green Guide*), and
- ii. be equipped with crush barriers to prevent forward movement.

By comparison, grandstands for seated spectators may be designed to a gradient of up to 35 degrees in the UK (see Section 12.10 of the *Green Guide*), or greater in other countries (depending on national standards), without the installation of barriers, other than in front of the front row of seats, at the rear of the back row, on gangways and around vomitories.



Clearly, if there is no barrier in front of every seating row, when spectators stand persistently there is a greater risk of tripping, or falling over the back of the seat in front, particularly during moments of excitement, celebration or conflict, thereby risking injuries both to themselves and to the spectators in front. The greater the number of spectators involved in such forward motions, the greater is the risk of progressive crowd collapse.

Progressive crowd collapse is where a person falls forwards, and in the process, causes one or more additional people to fall forwards and/or outwards.

It is recognised that the potential for progressive crowd collapse exists also in seated areas where spectators stand up only intermittently, in seated areas designed with a shallow gradient, and is possible even on level areas.

However, experience shows that, wherever spectators stand persistently in a seated area, the likelihood of progressive crowd collapse is greater, particularly when spectators strain to see the action or choose to stand on their own seats, or if they deliberately jump onto the seats or the spectators in front.

b. Lateral movement

(See Sections 8.7, 12.10, 12.12 and 12.22 of the *Green Guide*.)

Section 12.12 of the *Green Guide* recommends that for existing construction a minimum seat width of 460mm (measured between seat centres) be provided, and that for new construction this be increased to 500mm. Both these recommendations assume that the spectators will be seated.

When spectators stand up, however, they occupy more lateral space. Although this depends on the size of the individual, a seated person typically occupies 460mm of lateral space (hence the recommended minimum cited above), whereas the same person standing will occupy 550mm of lateral space (see **Figure SG01 4**), increasing to 600mm in cold temperatures, when spectators are likely to wear bulkier clothes.

It therefore follows that if a seating row is fully occupied at a ratio of one spectator per seat, and if those spectators then stand and cannot make the necessary adjustments (as they tend to on a standing terrace, where there is more scope to shift positions), spectators at each end of the seating row will encroach onto the radial gangways (see **Figure SG01 4**). This runs counter to a basic principle of safety management at sports grounds and other places of public assembly; that all radial and lateral gangways should be kept clear at all times during an event (see Section 8.7 of the *Green Guide*).

c. Backward movement

In addition to forward and lateral movements, spectators who stand in a seated area are subject to further risks when they step backwards, either deliberately or inadvertently.

These risks relate primarily to the design of the seats, as detailed in **Section SG01 2.3.c**.



d. Crowd management

It is widely recognised that persistent standing in seated areas can exert a negative impact on the operation of a ground's safety management procedures.

Most commonly, it requires the deployment of extra stewards and also leads to confrontations that further hamper the stewards' ability to perform their basic duties, such as keeping gangways clear.

SG01 1.5 Persistent standing and customer care

For those spectators who choose to stand persistently in seated areas it could be said that their experience of the event is, in effect, enhanced. However, their actions will inevitably impact upon the experience and enjoyment of those other spectators in the section (or, in some locations, in the adjoining sections) who, having purchased a ticket for a seated area, expect to be able to remain seated during most of the event, or who are shorter in stature, or who are unable to stand for prolonged periods or wheelchair users.

Responding to the complaints of such individuals has, in some instances, resulted in the management of grounds having to relocate those spectators, and/or to refund the cost of the tickets.

Therefore where persistent standing in seated areas occurs, management may decide that a better strategy would be to consider the provision of safe standing in seated areas, either by the redesign of existing seated areas or by the construction of new safe standing areas, according to the sections that follows.

SG01 1.6 Management responsibility

As emphasised throughout the *Green Guide*, responsibility for the reasonable safety of *all* people present within a sports ground lies at all times with the ground management.

Management also has a responsibility to be aware of, and where appropriate, to implement any legislation, published guidance or established practice that relates to the provision of safety at sports grounds.

The management of sports grounds where persistent standing in seated areas takes place should therefore read this *Supplementary Guidance* and, if the risks associated with persistent standing cannot be mitigated by enhanced safety management procedures – as outlined in **Section SG01 2.2.a** – they should actively consider the installation either of independent barriers in front of seats, or of seats incorporating barriers.

Where safe standing in seated areas is introduced, appropriate contingency plans will need be developed for inclusion within the sports ground's *Operations Manual* and/or its *Event Management Plan* (see Sections 3.4 and 3.36 of the *Green Guide* and Chapters 8.0 and 9.0 of *Supplementary Guidance 03: Event Safety Management*).



SG01 1.7 Status of Supplementary Guidance

As stated earlier, this document forms a supplement to the sixth edition of the *Green Guide*. It should therefore be read and acted upon *only* in conjunction with the *Green Guide*. It does not replace or negate existing guidance, unless specifically stated otherwise.

In common with the *Green Guide*, this *Supplementary Guidance* has no statutory force.

Furthermore, the guidance within this document should not be applied selectively. Indeed, users of both this *Supplementary Guidance* and the *Green Guide* may enhance their competency *only* if they have read and understood both documents in their entirety.

At the same time it is recognised that the guidance is neither definitive nor applicable in all circumstances. Should any doubts therefore arise, or should any deviation from the *Supplementary Guidance* and/or the *Green Guide* be proposed, it is recommended that independent, professional advice be obtained from competent persons.

As emphasised in Section 1.8 of the *Green Guide*, deviations from the *Green Guide*, and from this *Supplementary Guidance*, should only be acceptable when considered to be necessary and reasonable, and supported by evidence. Any decision to deviate from the *Green Guide* or the *Supplementary Guidance* should be recorded in a *List of Deviations*, with supporting written evidence, including the details of a risk assessment (see Section 3.3.d of the *Green Guide*).

Finally, it is once again emphasised that *additional compliance requirements* will be necessary for sports grounds in England and Wales which require a licence under the Football Spectators Act 1989. For details of those additional compliance requirements, please refer to the licensing section of the [SGSA website](#).

SG01 2.0 Management and design factors

SG01 2.1 How to use this Supplementary Guidance

This chapter is divided into three sections. **Section SG01 2.2** summarises the key strategic issues that the management of a sports ground should consider *before* deciding whether to provide for safe standing in seated areas.

Sections SG01 2.3 and **2.4** outline the key recommendations for the design and safety management of seated areas provided for safe standing, with reference to the relevant sections and figures from the *Green Guide*.

Section SG01 2.5 introduces **Annexes SG01 A** and **B**, in which indicative questions are provided to aid management in the assessment of both (P) and (S) factors for seated areas used for safe standing, based on Sections 12.24 and 12.25 of the *Green Guide*.

It is stressed that unless stated otherwise, seated accommodation used for safe standing should still be designed to meet the recommendations relating to seated accommodation as set out in Chapter 12 of the *Green Guide*, with the proviso that neither the *Green Guide* nor this *Supplementary Guidance* are definitive or applicable in all circumstances.

Should any doubts or queries arise concerning the application of guidance set out in this document, or should any deviation from the *Green Guide* be proposed, it is recommended that independent, professional advice be obtained from competent persons.

SG01 2.2 Safe standing in seated areas – management considerations

Clearly the decision to provide safe standing in a seated area will depend on various factors, not least the design, layout and construction of the area in question, and on local circumstances. However, in all locations the following strategic considerations should be addressed:

- a. Could the safety management issues arising from persistent standing in seated areas be resolved using other operational strategies, such as:
 - i. extra stewarding
 - ii. improved sightlines
 - iii. the removal of viewing restrictions in the affected area
 - iv. the banning of persistent offenders
 - v. educational programmes
 - vi. restricting the capacity of the seated area in question?



- b.** Will the provision of safe standing in seated areas be permitted under:
 - i.** legislation or regulations pertaining to the sports ground and/or
 - ii.** existing competition rules?
- c.** Do local licensing conditions or competition rules require that safe standing in seated areas be made available for both home supporters *and* visiting supporters?
- d.** Based on experience, regular monitoring and consultation with supporter groups, how many places should be made available to satisfy the demand for spectators who wish to stand in seating areas, and can such numbers be accommodated without adversely affecting the safety management of adjoining areas of viewing accommodation?
- e.** Would the provision of safe standing in seated areas have a negative impact on the viewing standards (including the sightlines), or the safety of disabled supporters or supporters occupying amenity seats?
- f.** Would the provision of safe standing in seated areas have a negative impact upon the viewing standards (including the sightlines), or safety of seated spectators in adjoining areas?
- g.** Would the provision of safe standing in seated areas require changes to the location and/or configuration of segregation areas in order to avoid compromising viewing standards (including sightlines)?

SG01 2.3 Safe standing in seated areas – design factors

The management's scope for, and ability to provide safe standing in seated areas will depend on a number of site specific design related factors, the most important of which, in the planning stage, are as follows:

a. Existing or new construction

Does the seated area already exist, or is it to form part of a new construction?

If the former, management should carry out detailed measurements and inspections of the area in question to determine whether the design criteria that follow can be met, or whether structural alterations will be required.

b. Viewing standards

(See Sections 12.2, 12.3, 12.4 and Figures 22 and 24 of the *Green Guide*.)

In order to meet the viewing standards recommended in the *Green Guide*, designers and management will need to demonstrate that in seated areas adapted for safe standing:

- i.** sightlines (expressed in 'C' values) are sufficient to enable standing spectators, and wheelchair users, to see the pitch or area of activity without straining (see **Figure SG01 1**), and
- ii.** spectators have a clear, unrestricted view of the whole pitch or area of activity.



Management should also ensure that the provision of safe standing in a seated area does not, in itself, have a negative impact on the viewing standards and experience of spectators in adjoining areas who wish to remain seated, or disabled spectators who cannot stand.

c. Seat design

(See Chapter 12 and Figures 25, 26 and 27 in the *Green Guide*.)

All seats with independent barriers, as illustrated in **Figure SG01 2**, and seats incorporating barriers, as illustrated in **Figure SG01 3**, should conform to the recommendations of Chapter 12 in the *Green Guide*. However, for safe standing in seated areas, the following additional considerations should be noted:

Existing construction: tip up seats will *not* be compatible with safe standing in a seated area if:

- i. they do not stay in the upright position when tipped up
- ii. any element – for example the underside of the seat or its edges, or its fittings (such as its frame, hinges, or arm rests) – protrudes into the clearway to such an extent that the backward movement or lateral movement of spectators along the seating row is impeded
- iii. there is a risk of injury to spectators from elements of the seat; for example from sharp edges.

Where fixed seats are in place, similarly, their design should ensure that there are no potential hazards to spectators stepping backwards.

d. Seating row depths and clearways

(See Sections 12.12, 12.13, 12.19–12.23, and Figures 25, 26 and 27 in the *Green Guide*.)

Whether existing or new construction, the seating row depths and clearways should be sufficient to allow for the installation of either:

- i. independent barriers in front of existing seats (see Section 12.19 of the *Green Guide* and **Figure SG01 2**), or
- ii. seats incorporating barriers (see Sections 12.20–12.23 of the *Green Guide* and **Figure SG01 3**).

The decision as to which option to implement will itself be based on consideration of the following factors:

Existing construction: the *Green Guide* recommends a minimum clearway of 305mm, *after* the installation of independent barriers or seats incorporating barriers.

The *Green Guide* also states (see Section 12.12) that for existing construction, seating row depths should be a minimum of 610mm where bench seating is in place, and 660mm for all other types of seating. These minimums, however, apply to seated areas only.



For such areas to be adapted for safe standing, management will need to demonstrate to the relevant safety authorities, on plans, and ideally by a trial installation of the proposed barriers and/or seats incorporating barriers, that the required minimum clearway can be achieved on the seating rows in question.

However, it is recommended that, wherever possible, in order to achieve safe standing in existing seating areas, a minimum seating row depth of 700mm and a minimum clearway of 400mm is preferred.

New construction

In the *Green Guide*, a clearway of 400mm and a seating row depth of 700mm are the recommended minimums for new construction. However, these minimums are based on the requirements of seated spectators. For safe standing in a newly constructed seated area, the preferred seating row depth of 800mm is recommended (see Section 12.12 of the *Green Guide*).

For existing and new construction: note also that Section 12.13 of the *Green Guide* states that a clearway of 305mm may be acceptable “where there are not more than seven seats in a row served by a gangway on one side, or not more than 14 seats in a row served by gangways on both sides”.

This remains the case for seated areas where spectators are seated, and for where they have been adapted for safe standing.



Figure SG01 1 Sightlines for spectators standing in seated areas

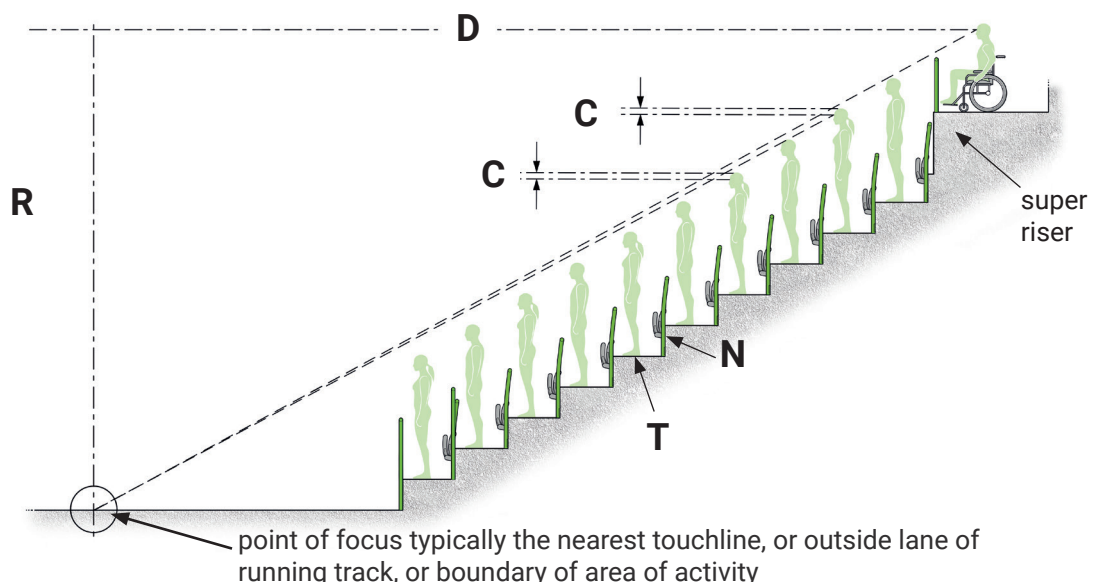
Existing construction: Figure 29 in the *Green Guide* states that if a conventional standing area for which good sightlines have been provided is then converted to seating, by creating one seating row for every two terrace treads, the resulting sightlines for seated spectators will also be of the recommended standard.

It is emphasised that this is *not necessarily* the case when a seated area is adapted for safe standing, using the existing treads and risers. Instead, all the relevant dimensions, as shown here, and calculations as shown in Figure 22 of the *Green Guide*, will have to be checked and, if necessary, the required adjustments made, in order to ensure that the resultant sightlines, expressed in 'C' values, are of the recommended standard of between 90–120mm. Where 'C' values below 90mm are proposed, the designer will need to demonstrate that the viewing standards of spectators will not be compromised.

Note also from Figure 28 in the *Green Guide* that, when calculating sightlines for standing spectators, 'C' values need to be calculated only for every *second* tread. This is because standing spectators have more freedom to re-adjust their position, and therefore the variation of eye level is greater than that of seated spectators.

To ensure that the viewing standards of wheelchair users are not compromised by standing spectators, it may be necessary to create a 'super riser', or to increase the height of an existing 'super riser', as illustrated below. If this is not possible, a sufficient number of wheelchair spaces should be provided elsewhere within the viewing accommodation.

New construction: 'C' values of between 90–120mm should be provided for all spectators in areas of seated accommodation designed for safe standing, including wheelchair users. Where 'C' values below 90mm are proposed, the designer will need to demonstrate that the viewing standards of spectators will not be compromised.



Key to diagram:

C = the 'C' value

D = the horizontal distance from the eye to the point of focus

N = the riser height

R = the vertical height from the point of focus

T = the seating row depth

Further guidance on sightlines and an alternative method for calculating 'C' values can be found in BS EN 13200-1: *Spectator Facilities: General characteristics for spectator viewing area*.



Figure SG01 2 Seats with independent barriers

(See Figure 26 in the *Green Guide*.)

As stated in Section 12.19 of the *Green Guide*, where independent barriers are placed in front of seats a minimum clearway of 305mm should be retained between the narrowest points, *after* the barriers have been fitted.

The barriers should measure a minimum of 800mm in height, but preferably 900mm, and be able to resist a load of 1.5kN/m (as stated in Table 14 of the *Green Guide* for Type 11 barriers).

This loading may need to be increased where a ratio of more than one spectator per seat is proposed (see [Section SG01 2.3.f.iv](#)).

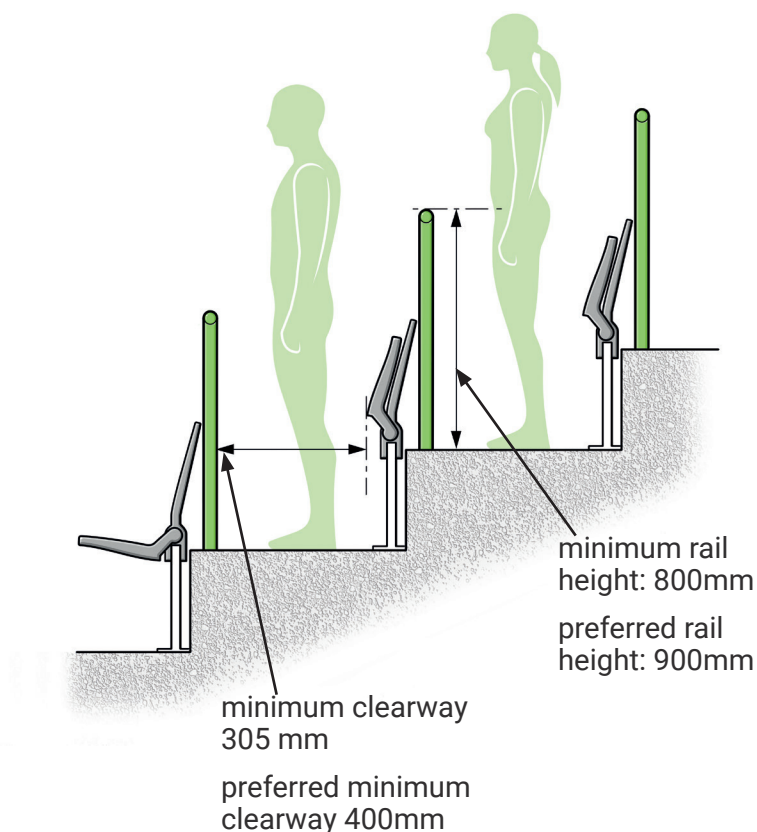
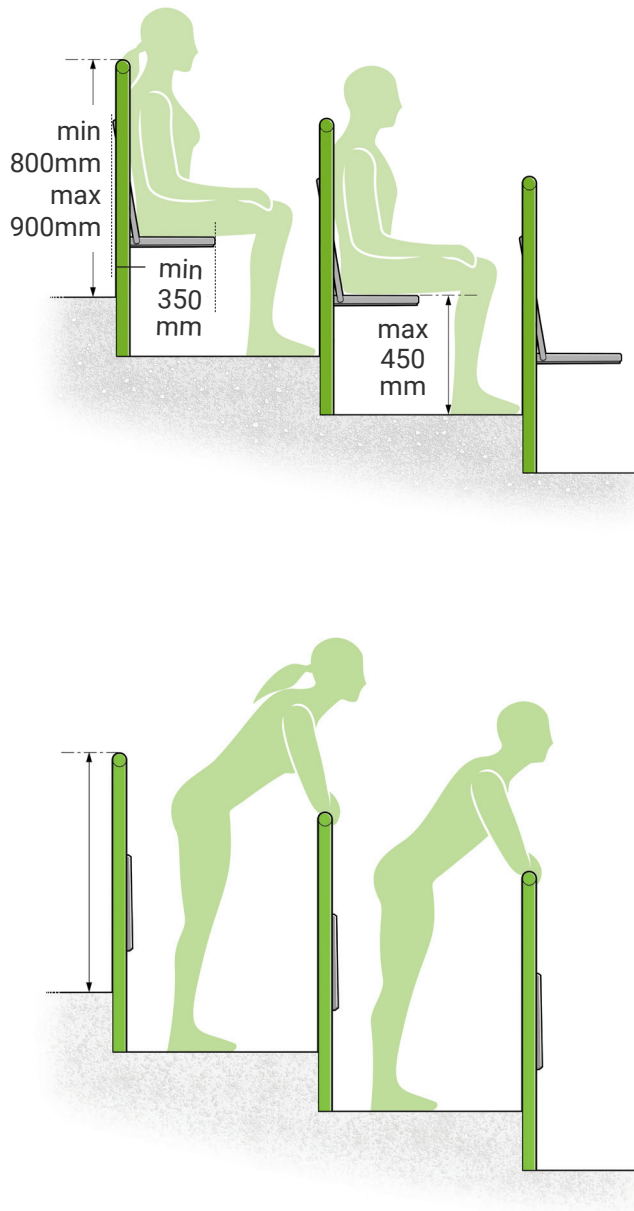




Figure SG01 3 Seats incorporating barriers



(See Figure 27 in the *Green Guide*.)

Barriers incorporated into seats, as described in Section 12.21 of the *Green Guide* and **Section SG01 2.3.d**, should be designed to a minimum height of 800mm and a preferred height of 900mm, measured from the datum, and should resist safely a minimum horizontal imposed load of 2.0 kN/m length.

The seats should be tip-ups, measuring at least 350mm in depth (see Figure 25 of the *Green Guide*) and no more than 450mm in height above the tread, and should be designed in such a way that no armrests or other elements protrude into the clearway. As stated in **Section SG01 2.3.c** the seat itself should remain in the upright position when not in use.

Seats incorporating barriers that are not used as seats during an event may be designed so that, *where legislation and competition rules allow*, prior to the event they can be locked in an upright position (by the management, *not* by spectators).

Note: seats incorporating barriers that differ from these illustrated examples – for example as described in 12.20.c of the *Green Guide*, a seat which by virtue of its elevated height, allows spectators the choice of whether to sit or stand during an event – may be acceptable, subject to satisfying all the requirements laid out in Sections 12.20 – 12.23 of the *Green Guide*.

Note also that barriers incorporated into seats should be designed to align with each other, so that there are no gaps or changes of height in any one row of seats between radial gangways.



e. Seat widths

(See Sections 12.12, 12.22 and Figure 25 in the *Green Guide*.)

Section 12.12 of the *Green Guide* recommends that for existing construction a minimum seat width of 460mm, measured between seat centres, be provided, and that for new construction this be increased to 500mm. Both these recommendations assume the spectators will be seated.

However as stated in Section 12.22 of the *Green Guide* (and repeated in **Section SG01 1.4b**), standing spectators occupy more lateral space. A seated person typically occupies 460mm of lateral space (hence the recommended minimum cited above), whereas the same person standing will occupy 550mm of lateral space (see **Figure SG01 4**), increasing to 600mm in cold temperatures, when spectators are likely to wear bulkier clothes.

It therefore follows that if the seating row consists of seats with seat centres of 460mm or 500mm, and is fully occupied, there is an increased risk that spectators who are standing will encroach onto the radial gangways, as illustrated in **Figure SG01 4**.

This runs contrary to one of the basic principles of safety management at sports grounds and other places of public assembly; that all radial and lateral gangways be kept clear at all times during an event (see Section 8.7 of the *Green Guide*).

If the spectators in that row are able to make the necessary adjustments (as they tend to on standing terraces, where there is more scope to shift positions), and there is no encroachment onto radial gangways, management will still need to demonstrate that the minimum space for each spectator is being achieved (see next Section).

If the spectators in that row *do not* make the necessary adjustments, and there is encroachment onto gangways, management will need to consider the following options:

- i.** Remove seats from the seating row: for example, a seating row of 28 seats, each with a seat width of 500mm, measures approximately 14.0m in length. However, $28 \times 550\text{mm} = 15.4\text{m}$. Therefore in order to allow 550mm per person and prevent encroachment onto the gangways, three seats should be removed. To allow 600mm per person, at least five seats should be removed.
- ii.** Reduce the ticket allocation in line with the calculations in (i) above.
- iii.** Realign each seat so that the seat centres increase.

New construction

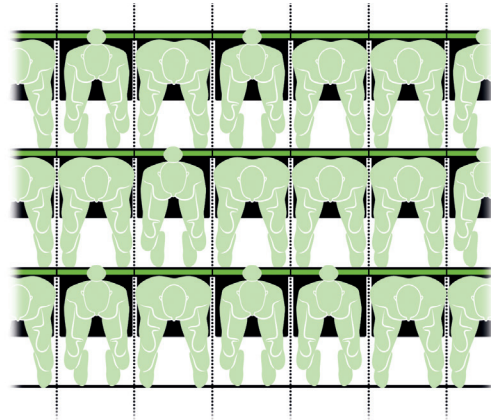
Seat centres should be a minimum of 550mm, and preferably 600mm. However management will still need to monitor seated areas used for safe standing in order to prevent encroachment onto radial gangways.



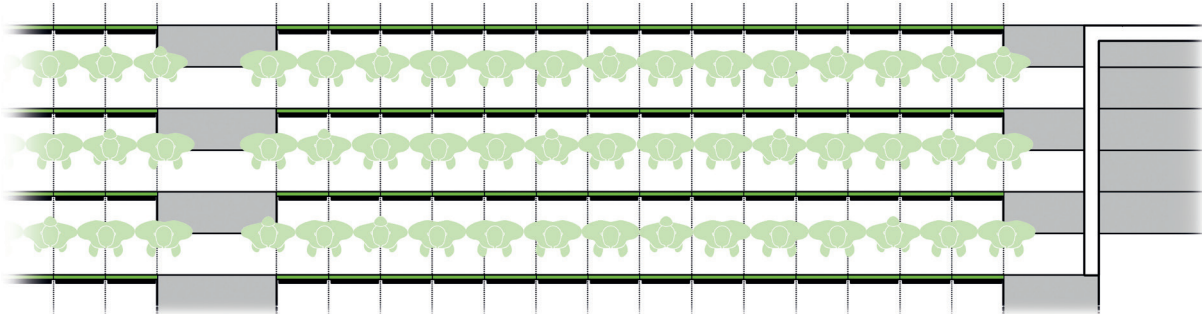
Figure SG01 4 Effects of lateral movement of spectators standing in seated areas

As stated in **Section SG01 1.4.b** and **2.3.e**, seated spectators (*right*) typically occupy a lateral space of 460–500mm.

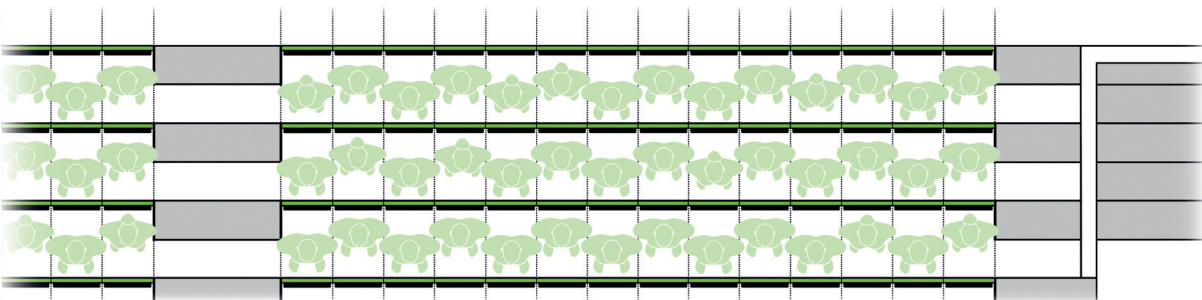
Standing spectators, however, tend to occupy a wider lateral space of 550mm, increasing to 600mm in cold temperatures, when spectators are likely to wear bulkier clothes.



If, when standing, spectators cannot make the necessary adjustments, those at each end of the seating row will inevitably encroach onto the radial gangways, as shown below. This runs contrary to one of the basic principles of safety management at sports grounds and other places of public assembly; that all radial and lateral gangways be kept clear at all times during an event (see **Section 8.7** of the *Green Guide*).



If, however, spectators are able to make the necessary adjustments, and there is no encroachment onto radial gangways, as seen below, management will still need to demonstrate that the space per spectator is not less than the recommended minimum for standing spectators in a seated area of 0.20m² per person (see **Section SG01 2.3.f**).





f. Space per spectator

(See Sections 2.9, 12.22 and Figure 11 in the *Green Guide*.)

In all parts of the viewing accommodation, the space available to each spectator forms a key factor in their safety, comfort levels and the quality of their experience.

In conventional standing areas where there are no allocated spaces, the key factor governing personal space is the setting of an 'appropriate density'.

Section 2.9 of the *Green Guide* recommends that for spectators in standing accommodation, the maximum density should be no greater than 4.7 persons per square metre, which equates to a minimum available space of 0.21m² per person.

However this calculation does not apply to seated areas adapted or newly built for safe standing. Instead, the space available to each standing spectator will depend upon:

- i. the width of the seat
- ii. the depth of the seating row
- iii. the depth of the clearway, and
- iv. whether a ratio of more than one spectator per seat or space is allowed. (For a list of conditions that need to be met in order for a ratio of more than 1:1 to be considered safe, see Section 12.22 of the *Green Guide*. Note, however, that as emphasised in **Section SG01 1.1**, sports grounds in England and Wales licenced under the Football Spectators Act 1989 are subject to additional compliance requirements. These include a stipulation that no more than one spectator per seat will be permitted.)

Existing construction: in seated areas adapted for safe standing, a minimum space of 0.20m² per person should be acceptable *after* the installation of independent barriers or seats incorporating barriers. Management will nevertheless need to demonstrate to the relevant safety authorities, on plans, and ideally by a trial installation of the proposed barriers and/or seats incorporating barriers, that the minimum space per spectator can be achieved on the seating rows in question.

In addition, once the area in question is in use, if it can be seen that, in order to prevent encroachment onto radial gangways, spectators are restricted to a space *less* than 0.20m² per person, a reduction in the capacity of that row will be required.

New construction

All newly constructed seating areas intended for safe standing should be designed on the basis of a minimum of 0.20m² per person *after* the installation of independent barriers or seats incorporating barriers. However, as stated in Figure 11 of the *Green Guide*, allowing for a larger space of 0.25m² per person is preferred. This larger space provides more room for spectators to eat, drink or use mobile phones, and to allow other spectators to enter or exit the seating row. It also takes into account the likelihood of spectators wearing bulkier clothes in cold conditions.



g. Rail design, fixings and loadings

(See Chapter 11 and Section 12.21.e and Figure 14 of the *Green Guide*.)

Management will also need to demonstrate to the relevant safety authorities on plans and, ideally, by a trial installation of the proposed barriers and/or seats incorporating barriers, that the condition of the seating rows, and, where relevant, the risers, are in good order and of sufficient strength for the new barriers or seats to be fixed, and to meet the recommendations set out in Section 11.3, on barrier fixings, and the loadings set out in Figure 14 and Sections 12.19 or 12.21 of the *Green Guide*.

Where a ratio of more than one spectator per seat or space is proposed, the horizontal imposed loads for independent barriers in front of seats and for seats incorporating barriers may need to increase above that shown in Figure 14 of the *Green Guide* (that is 1.5kN/m length for Type 11 barriers, and 2.0kN/m length for Type 12 barriers).

Furthermore, as stated in Section 12.21.e of the *Green Guide*, the barriers of seats that incorporate barriers should be designed to align with each other so that there are *no gaps or changes of height* in any one row of barriers between radial gangways.

Similarly, where independent barriers are installed in front of seats, there should be no gaps or changes of barrier height between radial gangways.

h. Seat and rail testing

(See Sections 11.19 – 11.26 and Figure 14 of the *Green Guide*.)

Before spectators are admitted to the area in question, the designer should be able to demonstrate that the structural design and the methods of fixing of all new independent barriers or seats incorporating barriers meet the loadings set out in Figure 14 of the *Green Guide*.

Thereafter, all such barriers should form part of both the management's planned maintenance programme, and its schedule for structural inspections and testing.

The management is further responsible for ensuring that the testing is carried out by, or under the supervision of, a competent person with the appropriate skills and experience.

i. Condition of seating row treads

(See Section 13.23 of the *Green Guide*.)

It should be noted that the design and specification of treads intended originally for seated spectators might not satisfy the requirements of treads used by standing spectators.

Attention is therefore drawn to the recommendations for standing areas detailed in Chapter 13 of the *Green Guide*, with particular regard to Section 13.23.a (concerning the physical condition of standing areas) and Section 13.23.e (on slip hazards).



j. Disabled spectators

(See Sections 12.1, 12.21.i and Figure 24 in the *Green Guide*.)

Section 12.1 of the *Green Guide* states that “new and existing seated areas will need to provide accessible viewing areas for disabled spectators, including ambulant disabled spectators”.

Section 12.21.i adds that disabled spectators are entitled to gain access to all areas in existing or new sports grounds.

However it is also recognised that in some locations, when spectators stand in a seated area, the views of disabled spectators are likely to be obstructed.

When planning for the provision of safe standing in seated areas, therefore, it will be necessary for management to assess the viewing standards of any accommodation currently allocated to disabled spectators within the seated area in question, *and* in any adjoining areas that might be affected, and if necessary, take remedial action, such as relocating those seats, or, in the case of spaces for wheelchair users, creating, or increasing the height of the ‘super riser’ (see Figure 24 in the *Green Guide* and **Figure SG01 1**).

Management should ensure that any changes or new arrangements are planned in consultation with disabled supporters and local disability groups, and that advice is sought from a suitably qualified access professional, and are subsequently reviewed on a regular basis. These plans should ensure that:

- i. the number of places for disabled spectators is not reduced
- ii. that each place offers adequate viewing standards
- iii. where appropriate, provision is made also for visiting disabled supporters (see **Section SG01 2.4.a**).

Further information is available via the publication *Accessible Stadia* and its accompanying *Supplementary Guidance*, both available from the [SGSA website](#).

k. Design of large safe standing areas in seated accommodation

(See Section 13.16 in the *Green Guide*.)

The issues highlighted in Section 13.16 of the *Green Guide* – in relation to the design of large areas of standing accommodation, and in particular to the risks associated with migration and the possible need to divide large areas into smaller sections – should also be considered when adapting or building seated areas intended for safe standing.



SG01 2.4 Safe standing in seated areas – safety management factors

The management of safe standing in seated areas should adhere to all the relevant recommendations in the *Green Guide*. However the following requirements and recommendations should also be noted:

a. Visiting supporters

(See Section 3.4 of the *Green Guide*.)

Where provision is made for visiting supporters to stand in seated areas, management should draw up specific plans for the safe management of the area in question.

These plans should be written, distributed to the relevant members of the safety management team, and be included within the *Operations Manual* and/or the *Event Management Plan* (see Sections 3.4 and 3.36 of the *Green Guide*). Relevant parts of the plan(s), including those relating to ticketing and any entry requirements, should also be shared with the visiting club in advance of ticket sales.

At grounds where safe standing in seated areas is made available to visiting supporters, it is emphasised that seating should also be made available to those who wish to remain seated.

Furthermore, as stated in the previous section, access to areas of safe standing in seated areas should be made equally available to disabled visiting supporters.

b. Ticketing

(See Section 3.30, 7.10.d, 12.25a and 16.33 of the *Green Guide*.)

Tickets for safe standing in seated areas should comply with the recommendations on information and design outlined in Section 3.30.f of the *Green Guide*.

Under no circumstances should there be any sale of unreserved places for areas of safe standing in seated areas.

c. Entry conditions and a Code of Conduct

Management should inform ticket holders, by all means available (such as on tickets, signs, in printed programmes and via social media), and/or by drawing up and distributing a *Code of Conduct* for ticket holders, that spectators entering a seated area used for safe standing are subject to certain entry conditions.

These conditions should make it clear that:

- i. Ticket holders are required to occupy the space in front of the seat allocated to them on the ticket – that is they cannot migrate to different spaces within the section, as would be possible on conventional terraced standing accommodation.
- ii. The area in question is for safe standing and that ticket holders must expect that other spectators will be standing (although of course they may sit on their allocated seat before and after the activity, or during an interval or half-time break).
- iii. Sitting or standing on the barriers, or standing on the seats, will not be



permitted.

- iv. Ticket holders will not be permitted to admit non-ticket holders to the section.

Management may also wish to draw up contingency plans for the relocation of spectators who find that they are unable to stand for the duration of the event, or who encounter other unforeseen problems.

Alternatively, management may choose to set specific entry restrictions, as below.

d. Entry restrictions

Management may wish to impose restrictions for entry to seated areas used for safe standing. Such restrictions may include:

- i. setting a minimum age
- ii. setting a minimum height
- iii. requiring purchasers to join a membership scheme
- iv. requiring purchasers to buy a season ticket or card.

e. Entry controls and identification aids

In order to prevent non-ticket holders from entering, it will be necessary for management to place stewards at each entry point to any seated area used for safe standing.

These stewards should be fully briefed on the entry conditions and restrictions.

It may assist management and stewards if ticket holders are issued, either at the point of sale, or preferably on entry to the section in question, with some form of visible identification in addition to the actual ticket; for example, a brightly coloured and non-transferable wristband, armband or lanyard.

If adopting this recommendation, management will need to ensure that:

- i. The identification aids are worn at all times during the event in such a way that they are visible to stewards and, if appropriate, to CCTV cameras.
- ii. Ticket holders are informed as to whether they should retain possession of the identification aids for future events, or whether they should return them to a steward on egress.
- iii. The transfer of any identification aid to a non-ticket holder, either during an event, or in advance of a future event, will not be permitted.

f. Identification and marking of seats and spaces

(See Sections 12.25.b of the *Green Guide*.)

As stated in **Section SG01 2.4.c**, ticket holders are required to occupy the space in front of the seat allocated to them on their ticket.

To assist both management and spectators, all seats in areas of seating used



for safe standing must conform to the requirements set out in Section 12.25.b of the *Green Guide*, with particular regard to clause ii, which states that 'where tip-up seats are installed, to avoid congestion and confusion, and for ease of reading, seat identification marks should be located on the front of the back rest, rather than on the underside of the seat'.

For additional clarity, management may also wish to delineate the boundaries of each standing place using paint of a conspicuous colour, or a proprietary strip.

g. Stewarding responsibilities

In common with all areas of spectator accommodation, stewards will be required to monitor spectators in seating areas used for safe standing. However, additional vigilance may be necessary in such areas to ensure that spectators:

- i. occupy their allocated seat/space
- ii. do not encroach onto gangways
- iii. do not sit or stand on rails/barriers
- iv. do not migrate to other rows
- v. do not facilitate the entry of non-ticket holders to the area
- vi. do not compromise any segregation policies in place.

h. CCTV coverage

In order to take into account the fact that spectators will be standing, management should ensure that CCTV coverage of the area in question is sufficient both in the extent of the area covered and the quality of the images.

i. Management of large seated areas adapted or constructed for safe standing

Attention is further directed to the recommendations set out in Section 13.16 of the *Green Guide*, in relation to the management of large areas of standing accommodation, and in particular to the risks associated with migration and the possible need to divide large areas into smaller sections.

SG01 2.5 (P) and (S) factors for safe standing areas in seated accommodation

(See Sections 2.4, 12.24, 12.25, 13.23 and 13.24 of the *Green Guide*.)

As detailed in Section 2.4 of the *Green Guide*, in order to calculate the holding capacity, each part of a ground's viewing accommodation should be assessed according to its physical condition, known as the (P) factor. Similarly, each part should be assessed according to the quality of the safety management in place, known as the (S) factor.

To assist in the assessment of (P) and (S) factors for safe standing areas in seated accommodation, a list of sample indicative questions may be found in **Annexes SG01 A and B** of this *Supplementary Guidance*.

Note also that both **Annex SG01 A** and **Annex SG01 B** are available on the SGSA website and may at times be amended or supplemented.

Annex SG01 A

(P) factor indicative questions for seated areas used for safe standing

This Annex provides a sample list of the indicative questions that management, or their representatives, should answer when assessing (P) factors in a seated area used for safe standing.

The (P) factor is an assessment of the physical condition of a ground or section of a ground, and forms a fundamental part of the capacity calculation process, as explained in Chapter 2 of the *Green Guide*.

This list is not intended to be exhaustive, and the questions may vary from ground to ground.

Note also that both this **Annex SG01 A** and **Annex SG01 B** are available on the SGSA website and may at times be amended or supplemented.

Name of safe standing area in seated accommodation:

Indicative question	Question considered?	What evidence is there that the question has been considered?
a. Are the surfaces of all seating row treads and gangways serving the area in question slip resistant?		
b. Are the seating row treads and gangways maintained in a serviceable/ usable condition?		
c. Does the design of the seating row treads and gangways allow standing water and/or ice to build up?		
d. Are nosings clearly marked with a non-slip paint of a conspicuous colour?		
e. Is there a consistent and co-ordinated system of signs to direct ticket holders of the area in question?		
f. Are all letters and/or numbers used to identify seat rows and individual seats in place and legible?		



Indicative question	Question considered?	What evidence is there that the question has been considered?
g. Are all independent barriers in front of seats, or seats incorporating barriers, and their fixings, maintained, inspected and tested as per the recommendations in Chapter 11 of the <i>Green Guide</i> ?		
h. Do the independent barriers, or the barriers of seats incorporating barriers, align with each other, or are there any changes in height, or any gaps?		
i. Where installed, do the tip-up seats stay in the upright position when tipped up?		
j. Do any seat elements protrude into the clearway in such a way as to impede backward movement or the free flow of spectators along the seating row?		
k. Do any parts of any seat represent a hazard to spectators?		
l. Are spectators' viewing standards in the area in question, including disabled spectators, adversely affected by spectators standing in the seated area?		
m. Are spectators' viewing standards in adjoining areas, including disabled spectators, adversely affected by spectators standing in the seated area in question?		
n. Are the safe standing areas sufficiently lit (using natural and/or artificial light, including emergency lighting) to enable spectators to identify hazards?		
o. Are spectators able to leave, and return to, their viewing position, by a clearly defined and properly maintained route at any time during an event, eg. to access toilet, catering or other facilities?		
p. Are there any elements in the design of the area in question that might prevent spectators from being treated or safely removed in the event of a medical emergency?		

Annex SG01 B

(S) factor indicative questions for seated areas used for safe standing

This Annex provides a sample list of the indicative questions that management, or its representatives, should answer when assessing (S) factors in a seated areas used for safe standing.

The (S) factor is an assessment of the safety management of a ground or section of a ground, and forms a fundamental part of the capacity calculation process, as explained in Chapter 2 of the *Green Guide*.

This list is not intended to be exhaustive, and the questions may vary from ground to ground.

Note also that both this **Annex SG01 B** and **Annex SG01 A** are available on the SGSA website and may at times be amended or supplemented.

Name of safe standing area in seated accommodation:

Indicative question	Question considered?	What evidence is there that the question has been considered?
a. Has the management conducted a risk assessment to determine the number, location and duties of safety staff serving the area in question, and are these details set out in the <i>Event Management Plan</i> ?		
b. In relation to the area in question, are the roles of the safety management team at all levels, fully and clearly defined in the <i>Event Safety Policy</i> ?		
c. Has the management's <i>Operations Manual</i> and/or <i>Event Management Plan</i> been updated to take into account the provision of safe standing in a seated area?		
d. Has the <i>Stewarding Plan</i> been updated to take into account the specific needs of the area in question?		



Indicative question	Question considered?	What evidence is there that the question has been considered?
e. Have stewards been trained and briefed to serve the specific needs of the area in question?		
f. Is there a <i>Code of Conduct</i> for spectators purchasing tickets for the area in question, and is this <i>Code</i> enforced?		
g. Are adequate stewarding procedures in place to check the tickets or means of identification of spectators entering the section?		
h. Are ticket holders occupying the seat / place for which they have been allocated?		
i. Is there evidence of non-ticket holders entering the area in question?		
j. Do stewards respond adequately to spectators sitting or standing on barriers or standing on seats in the area in question?		
k. Are stewards able to prevent spectators from encroaching onto radial gangways?		
l. Does the management have in place procedures to relocate any spectator who, despite having bought a ticket for the area in question, requests a move to another section?		
m. Does the management have written risk assessments identifying hazards and outlining mitigating factors for the area in question?		
n. Does the management have written contingency and emergency plans for the area in question?		
o. Have there been any incidents in the area in question requiring the implementation of a contingency plan?		
p. If yes, was the contingency plan reviewed following the incident?		
q. Are all records of pre and post-match safety checks for the area in question complete, up to date and readily accessible?		



Indicative question	Question considered?	What evidence is there that the question has been considered?
r. Are the location, nature and cause of all incidents that may affect the safety of those in the area in question recorded in a log book, and are these, together with any complaints, subsequently followed up?		
s. Are records kept of post-event briefings for the area in question, and who is responsible for acting upon any issues arising?		



Further references

Sports Grounds Safety Authority

www.sgsa.org.uk

[Guide to Safety at Sports Grounds \(Green Guide\)](#)

[Licensing](#)

[Accessible Stadia](#)

[Safe Management of Standing at Football – research findings](#)

Other guidance available

[Supplementary Guidance 02: Planning for Social Distancing at Sports Grounds](#)

Supplementary Guidance 03: Safety Management (in preparation 2021)

UK Government legislation

[Football Spectators Act 1989](#)

Other organisations

[Level Playing Field](#)

