

Figure SG02W 1 Methods of measurement for 2.0m physical distancing

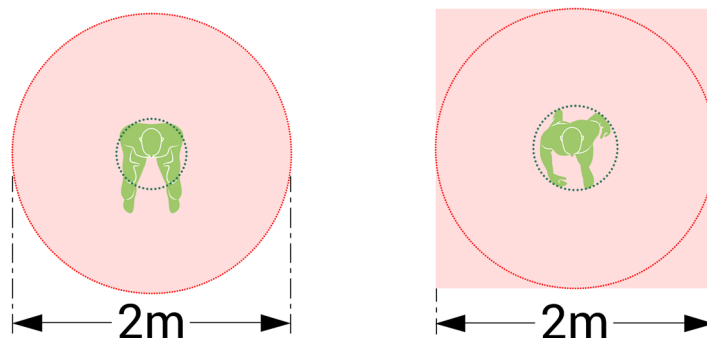
Shown here are two methods of measuring a 2.0m physical distance.*

The choice of which method to adopt for the purposes of calculation and planning will depend on current Government advice and on the policy of the ground management towards spectator safety.**

Method One

Under this method, the circle used for calculation and planning purposes is **2.0m diameter, centred on the body**, regardless of whether it applies to people seated, standing or walking.

The dotted inner circles represent average widths of **500mm** for people seated, and **600mm** for people standing or walking (thereby taking into consideration side-to-side movement).



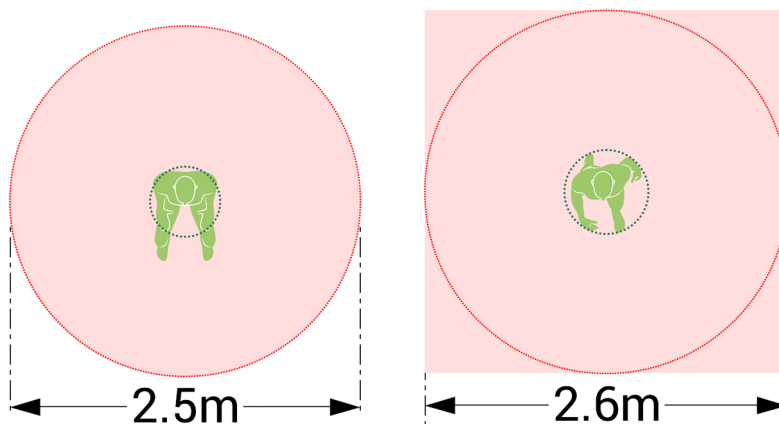
Method One results in a physically distanced *side-to-side* space of approx **1.5m** between two people sitting and approx **1.4m** between two people standing or walking. Note that when calculating the capacities of standing areas and concourses, a **2.0m square**, equating to **4.0 m² per person** should be used, rather than a circle.

Method Two

Under this method, the circle used for calculation and planning purposes takes into account the width of an individual, and therefore two different circles are needed.

For a **seated person** a **2.5m** diameter circle is used, to allow for a typical body width of **500mm**.

For a **standing or walking person**, a **2.6m** diameter circle is used, to allow for typical side-to-side movement in the range of **600mm** in width.



Method Two results in a physically distanced space *in all directions* of approx **2.0m** between two people sitting, standing or walking. Note that when calculating the capacities of standing areas and concourses, a **2.6m square**, equating to **6.8 m² per person**, should be used, rather than a circle.

* If government advice allows a reduced physical distance of 1.0m per person to be implemented, the equivalent measurements are **Method One**: 1.0m diameter circle, and **Method Two**: for seated accommodation a 1.5m diameter circle, and for standing areas or concourses, for calculation purposes, a 1.6m square (2.6 m² per person).

** Management may choose to use Method One in one section of the ground, and Method Two in another, provided that the sections are separate and with controlled entry.



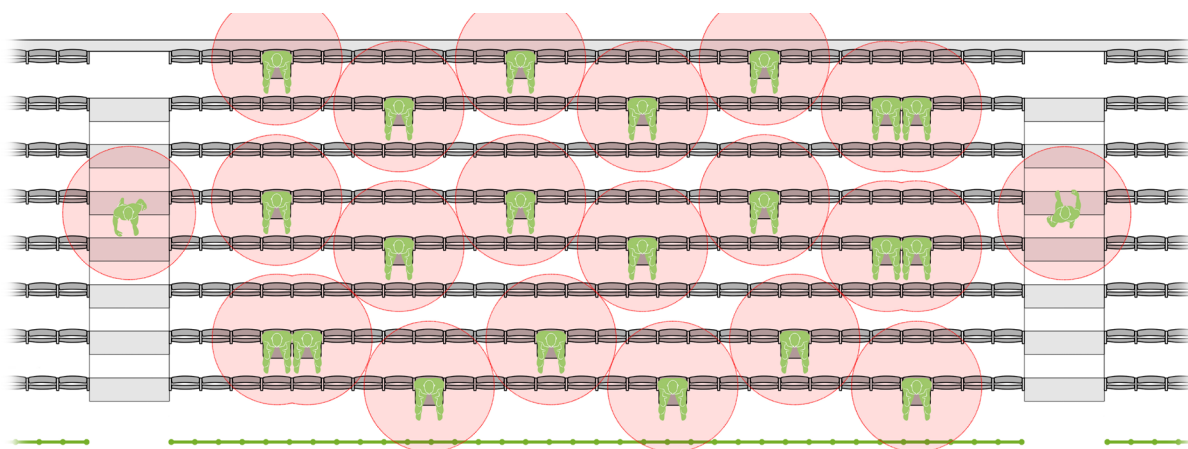
Figure SG02W 2 Seat allocation examples – Method One, mainly singles

These examples illustrate some of the consequences of 2.0m physical distancing for a block of 224 seats in eight rows, using **Method One**. As shown, the majority of seats are allocated as singles. For seat allocations in larger groups see **Figure SG02W 3**.

The examples are for illustrative purposes only and the percentages quoted relate only to the examples. The examples should be viewed in conjunction with Figure 25 in the *Guide* (seating row depths and seat dimensions).

Management must check the dimensions for each seated area and assess how best to balance the need to (a) mitigate health risks, for example from spectators brushing past each other on seat rows and in gangways, and (b) adopting new management procedures, with (c) the desire to optimise occupancy.

Note that numbers arrived at after optimising seat allocations will be permitted only if the entry, exit and emergency exit capacities and, where applicable, the concourse capacity, can support such numbers whilst maintaining physical distancing.



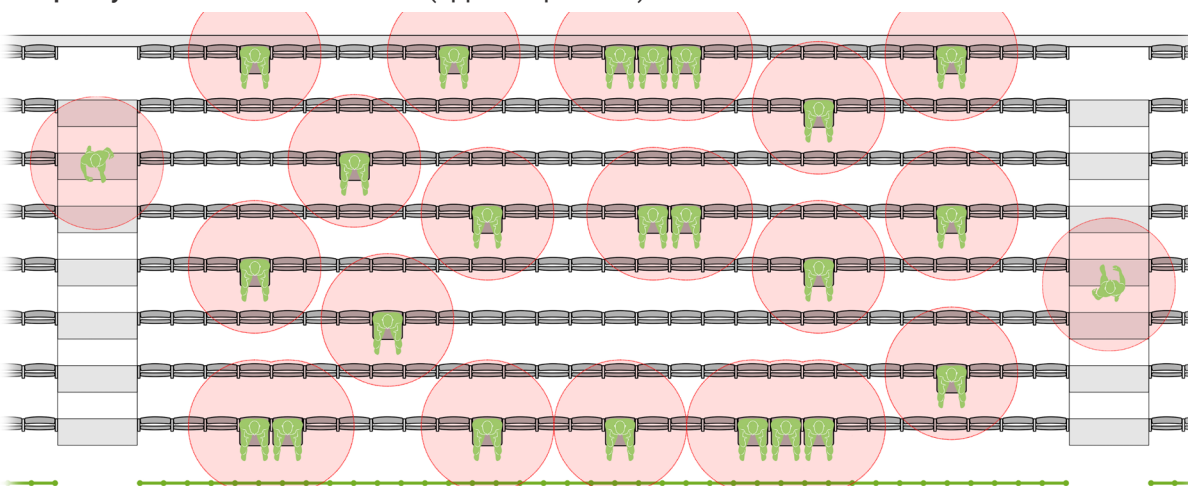
Method One: Example 1 (above)

Dimensions: Seat row depths: 700mm / seat widths: 460mm / radial gangway widths: 1.2m

Seat allocation: Mainly singles plus three pairs

Physical distancing requirements: Three seats next to every radial gangway and every third seating row must be kept unoccupied. One-way flow only possible in radial gangways at any one time.

Occupancy level: 21 seats out of 224 (approx 9 per cent)



Method One: Example 2 (above)

Dimensions: Seat row depths: 800mm / seat widths: 500mm / radial gangway widths: 1.2m

Seat allocation: Mainly singles plus two pairs and two threes

Physical distancing requirements: Three seats next to every radial gangway must be kept unoccupied. Every seating row is occupied. One-way flow only possible in radial gangways at any one time.

Occupancy level: 23 seats out of 224 (approx 10 per cent)



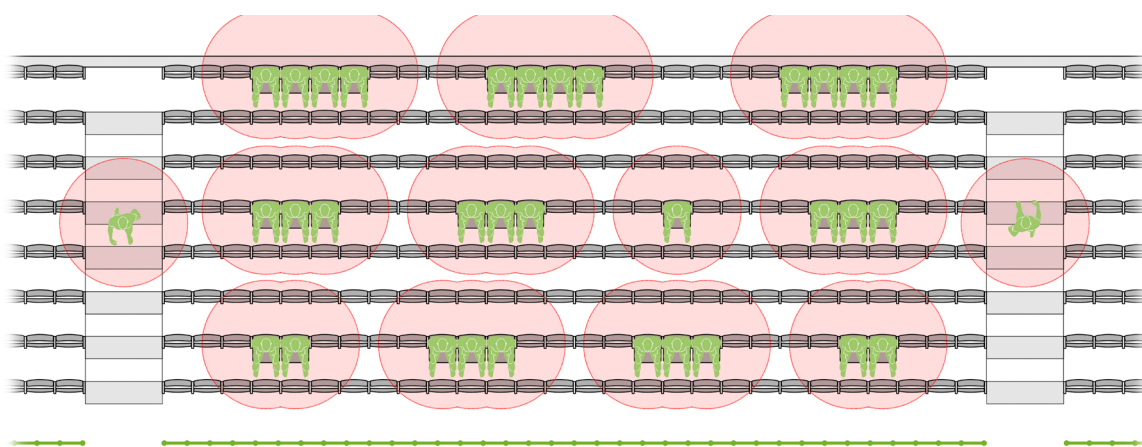
Figure SG02W 3 Seat allocation examples – Method One, larger groups

These examples illustrate some of the consequences of 2.0m physical distancing for a block of 224 seats in eight rows, using **Method One**. As shown, by allocating seats in larger groups in the same row, a higher occupancy rate is achieved, but two rows must remain unoccupied between each occupied row and there is a greater likelihood of brush pasts.

The examples are for illustrative purposes only and the percentages quoted relate only to the examples. The examples should be viewed in conjunction with Figure 25 in the *Guide* (seating row depths and seat dimensions).

Management must check the dimensions for each seated area and assess how best to balance the need to (a) mitigate health risks, for example from spectators brushing past each other on seat rows and in gangways, and (b) adopting new management procedures, with (c) the desire to optimise occupancy.

Note that numbers arrived at after optimising seat allocations will be permitted only if the entry, exit and emergency exit capacities and, where applicable, the concourse capacity, can support such numbers whilst maintaining physical distancing.



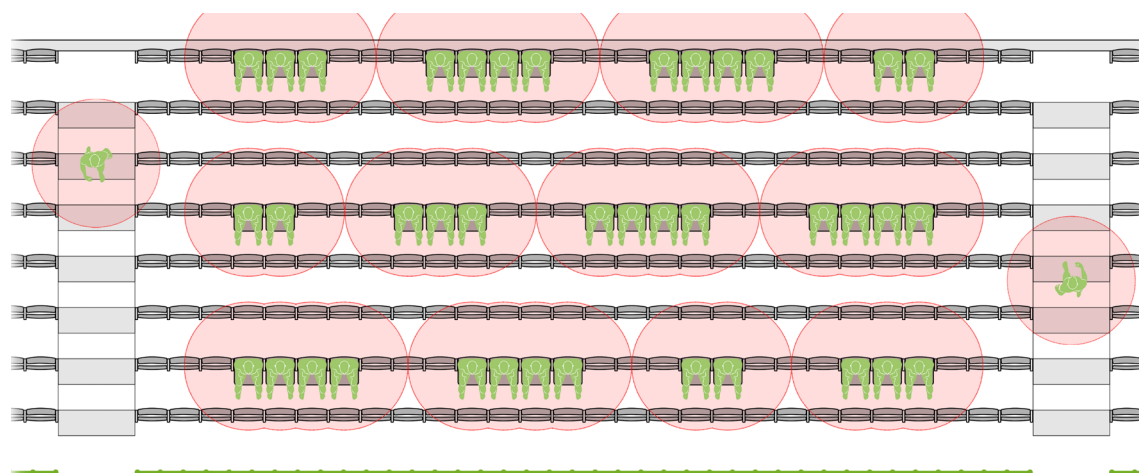
Method One: Example 3 (above)

Dimensions: Seat row depths: 700mm / seat widths: 460mm / radial gangway widths: 1.2m

Seat allocation: A combination of singles, pairs, threes and fours

Physical distancing requirements: Three seats next to every radial gangway must be kept unoccupied and only every third seating row can be occupied. One-way flow only possible in radial gangways at any one time.

Occupancy level: 32 seats out of 224 (approx 14 per cent)



Method One: Example 4 (above)

Dimensions: Seat row depths: 800mm / seat widths: 500mm / radial gangway widths: 1.2m

Seat allocation: A combination of pairs, threes and fours

Physical distancing requirements: Three seats next to every radial gangway and two seating rows between each occupied seating row must be kept unoccupied. One-way flow only possible in radial gangways at any one time.

Occupancy level: 39 seats out of 224 (approx 18 per cent)



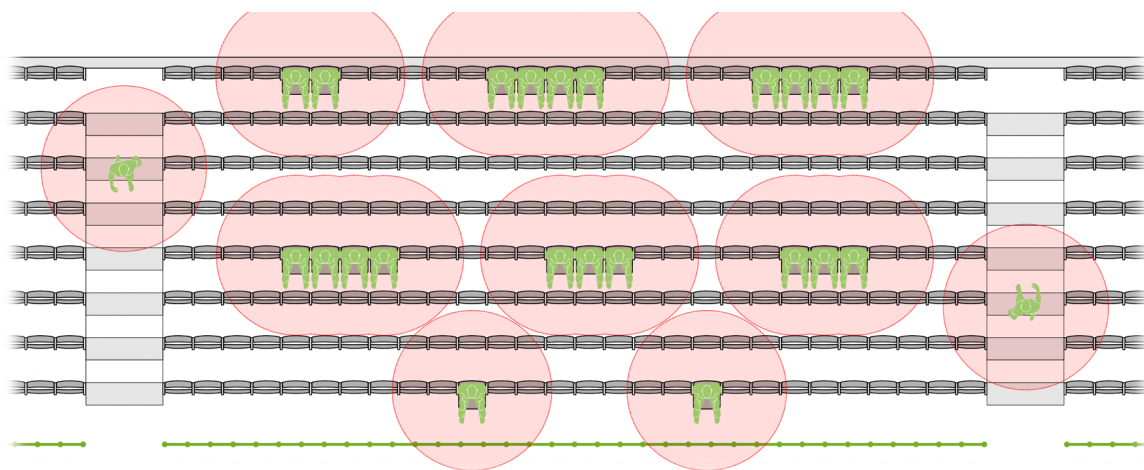
Figure SG02W 4 *Seat allocation examples – Method Two, larger groups*

These examples illustrate some of the consequences of 2.0m physical distancing for a block of 224 seats containing 8 rows, using **Method Two**. As shown, by allocating seats in larger groups, a higher occupancy rate is achieved, but two or three seating rows must remain unoccupied between each occupied seating row and there is a greater likelihood of brush pasts.

The examples are for illustrative purposes only and the percentages quoted relate only to the examples. The examples should be viewed in conjunction with Figure 25 in the *Guide* (seating row depths and seat dimensions).

Management must check the dimensions for each seated area and assess how best to balance the need to (a) mitigate health risks, for example from spectators brushing past each other on seat rows and in gangways, and (b) adopting new management procedures, with (c) the desire to optimise occupancy.

It is emphasised that capacity assessments arrived at after optimising seat allocations will be permitted only if it can be shown that the entry, exit and emergency exit capacities and, where applicable, the concourse capacity, can support such numbers when physical distancing is in place.



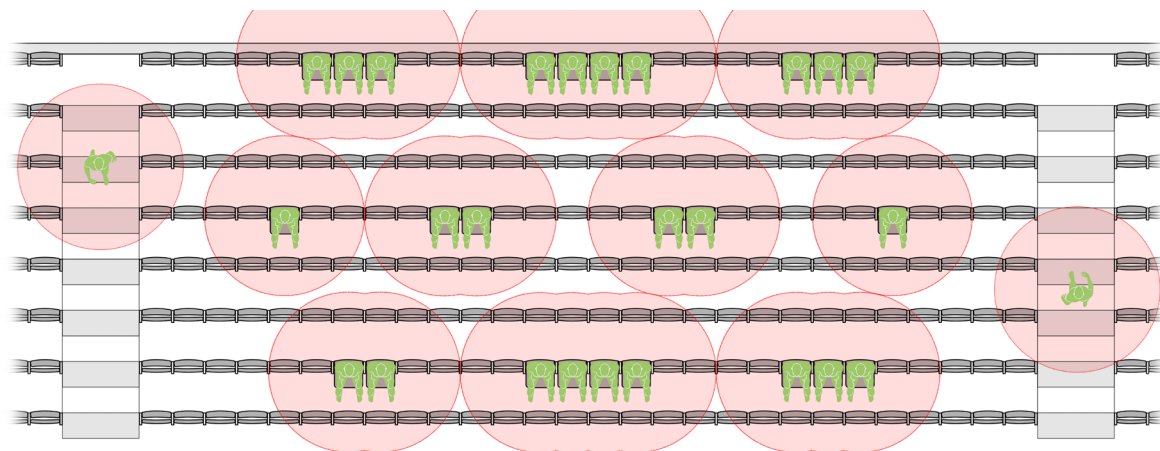
Method Two: Example 1 (above)

Dimensions: Seat row depths: 700mm / seat widths: 460mm / radial gangway widths: 1.2m

Seat allocation: A combination of singles, pairs, threes and fours

Physical distancing requirements: Four seats next to every radial gangway must be kept unoccupied and only three of the eight rows can be occupied. One-way flow only possible in radial gangways at any one time.

Occupancy level: 22 seats out of 224 (approx 10 per cent)



Method Two: Example 2 (above)

Dimensions: Seat row depths: 800mm / seat widths: 500mm / radial gangway widths: 1.2m

Seat allocation: A combination of singles, pairs, threes and fours

Physical distancing requirements: Four seats next to every radial gangway must be kept unoccupied and only three of the eight rows can be occupied. One-way flow only possible in radial gangways at any one time.

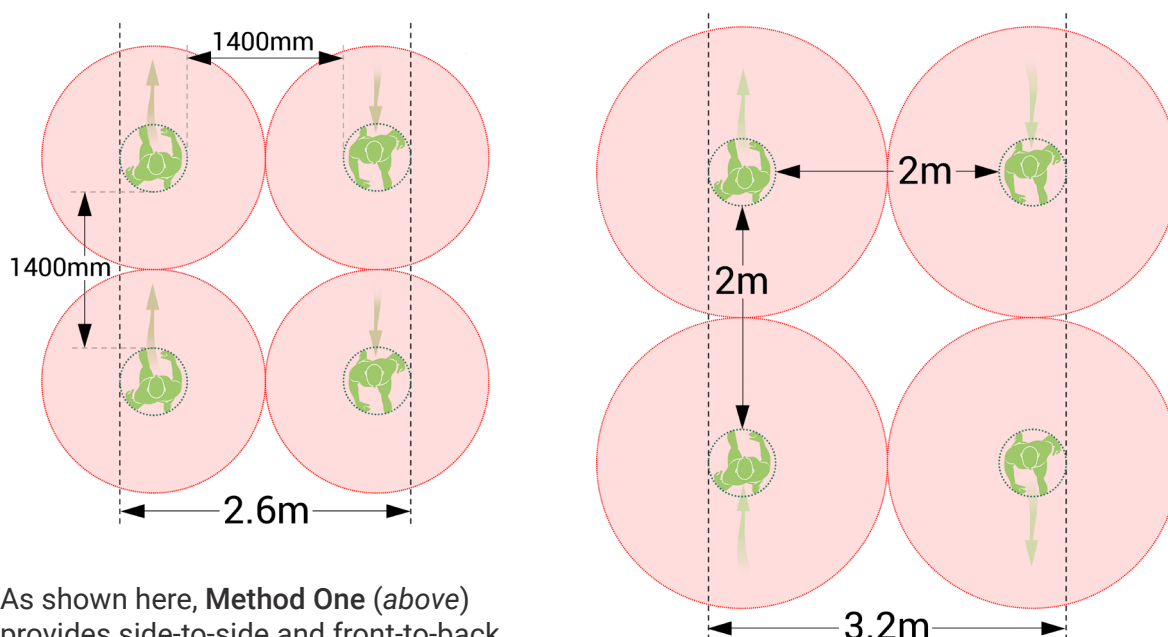
Occupancy level: 25 seats out of 224 (approx 11 per cent)

Figure SG02W 8 *Circulation routes – widths, flow rates and directional flow*

Physical distancing requires management to assess all circulation routes, including entry points, stairways, radial and lateral gangways, vomitories, corridors and exits.

When making this assessment, management should apply the physical distancing measurement derived from their preferred method of calculation: that is, for **Method One**, a circle of **2.0m**, or for **Method Two**, a circle of **2.6m** (see **Figure SG02W 1**). Note however that whichever method is used, allowance must be made for a body width of **600mm** to account for side-to-side movement.

Note also that owing to the need for people to regulate their pace in order to maintain physical distancing, the flow rates will be slower than under standard operational conditions (as set out in Section 10.10 of the *Guide*), and should be measured in 'people per channel per minute', rather than 'people per metre per minute'.



As shown here, **Method One** (above) provides side-to-side and front-to-back physical distancing of approximately 1400mm. **Method Two** (right) provides side-to-side and front-to-back physical distancing of approximately 2.0m.

It is stressed that both these examples show **minimum** circulation widths for two-way flow, and assume that people in both channels are able walk as close as possible to the route's outer edge. This should not be a problem on a gangway, provided that the seats immediately adjoining the gangway are unoccupied. But if there are walls on either side of the circulation route, the entire width must be clear of protruding elements. If there is not a clearway, flow in only one direction will be possible.

Note also that when planning directional flow, where applicable allowance should be made for the movements of wheelchair users.

Figure SG02W 9

Crowd density levels on concourses

An understanding of crowd density levels is vital for the safe management of concourses and circulation routes, and even more so if physical distancing is to be implemented effectively.

As stated in Section 9.4 and Figures 10 and 11 of the *Guide*, the optimum density for general concourse areas – that is where people stand and gather, rather than where they queue – is 20 persons per 10 square metres (*top right*).

This level of density is generally considered as comfortable, allowing individuals the space to eat, drink or use mobile devices without impinging upon the space of other people.

The comparative densities for physical distancing will depend on the method chosen by management to measure physical distances, as explained in **Figure SG02W 1** and **Section SG02W 2.2**.

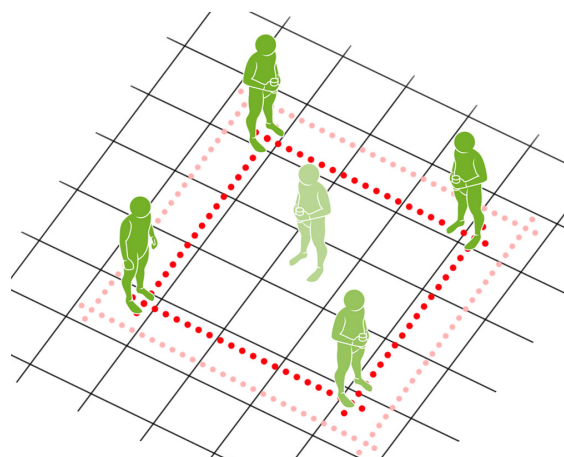
It is further stressed that under both methods, the density levels shown here should be considered a *maximum*, and one that applies to *all areas* of the concourse; that is, in queues, counter areas and so on.

In other words, whereas in standard operational mode, a higher density level of around 40 persons per 10 square metres may be considered acceptable in queues for bars, counters and toilets, when physical distancing is in place this higher density level will not be acceptable.

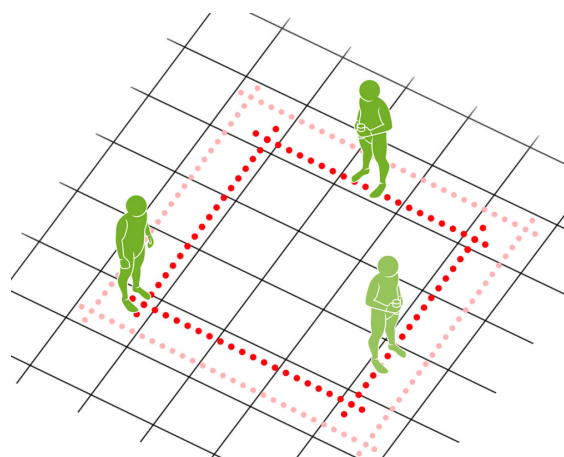
If at any point during an event management becomes aware that density levels are too high, one or more of the control measures suggested in Section SG02 8.5 will have to be implemented in order to limit the number of people on the concourse at any one time.



Standard operational mode (above): optimum concourse density of 0.5m² per person or 20 persons per 10 square metres



Method One (above): max density under physical distancing of 4.0m² per person (see **Figure SG02W 1**), or 2.5 persons per 10 sq m, or, as shown here, 5 persons per 20 sq m.



Method Two (above): max density under physical distancing of 6.8m² per person (see **Figure SG02W 1**), or approx 1.5 persons per 10 square metres, or, as shown here, 3 persons per 20 sq m.