



The Four Tenets of Means of Escape

Considering the means of escape requirements for a job can sometimes seem daunting. What purpose group is it? What section of Approved Document B should be used? Can the Approved Document be used for this use? What other code should be used? How do I interpret this? Why is a particular requirement needed? Do we have control anyway? In order to find our way through the myriad of questions, which are being constantly thrown at us, we need some order in our lives.

I like to look at things simply. Over the years those who have imparted their knowledge to me have delivered gems that have remained firmly attached to my memory. Of all the hundreds of pieces of advice, there are four that remain floating on the surface, reminding me of their value daily. These gems I have called 'the four tenets of means of escape'. You will not find them in any document sited in the Building Regulations, or any obscure fire engineering guide, simply because they are all about how to think about a job.

The four tenets are:-

- 1. Check your control**
- 2. Never assume anything**
- 3. Read all the words**
- 4. Start at the top**

On the face of it these four pieces of advice are simple and unassuming, but therein lies their power. Let us now look at each item in turn.

1. Check your control

As we all know Building Regulations and other fire safety legislation have limits of application. There is little point in spending time deliberating over a particular means of escape issue when you actually have no power to enforce it in the first place. This may seem obvious but it is often forgotten.

Building work

As far as the Building Regulations are concerned control for means of escape stems from two distinct areas. Firstly somebody must be doing 'building work'.

Secondly an existing **building** must not be made worse AND any **new work** needs to comply. Outside of this we have no powers. The Fire Authority may however have powers over existing situations and of course we are required to consult them on all workplaces.

Legislation applicable to Local areas

Acts of Parliament that apply to a local area may also be applicable and similarly the limits of application of this legislation need to be checked before they are used. Every local piece of legislation will have its own peculiarities that need to be understood.

2. Never assume anything

We have all done this at sometime and it can lead us into all sorts of trouble. Assumptions come in many forms. I can give you a simple example related to plans. I once had a plan submitted as shown in figure 1. On the face of it there is no problem at this level. However I decided to ask for more details of the stair area, as the steps were not actually shown in the stairway enclosure.

The plan in fig 2 was submitted. What we now see is that the convenient exit direct to the stairway from the bar was in fact just a cupboard under the stairway!

Another area where assumptions frequently are made is why a particular requirement of the Approved Document exists. This makes it difficult when assessing an alternative solution. Unless you actually know why the requirement is there it is dangerous to assume.

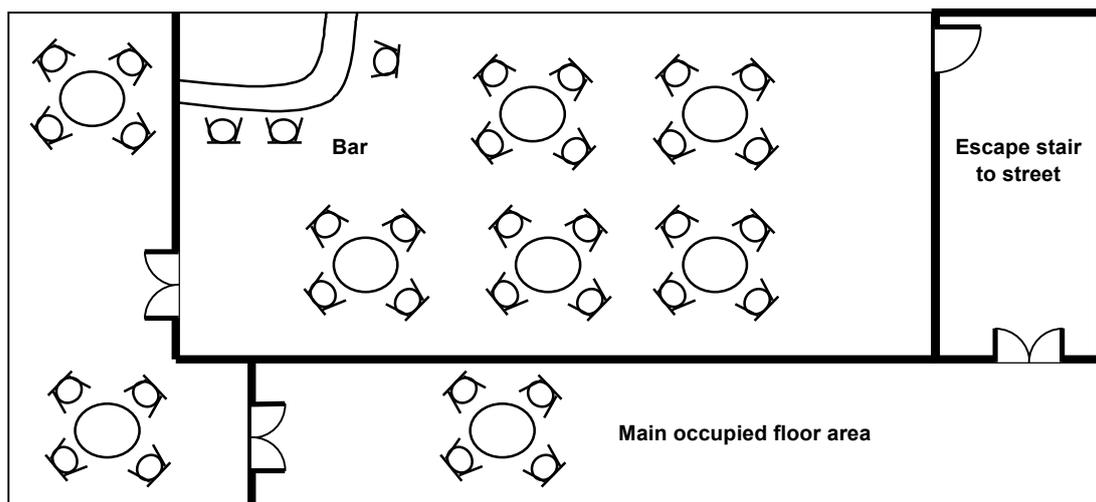


Figure 1

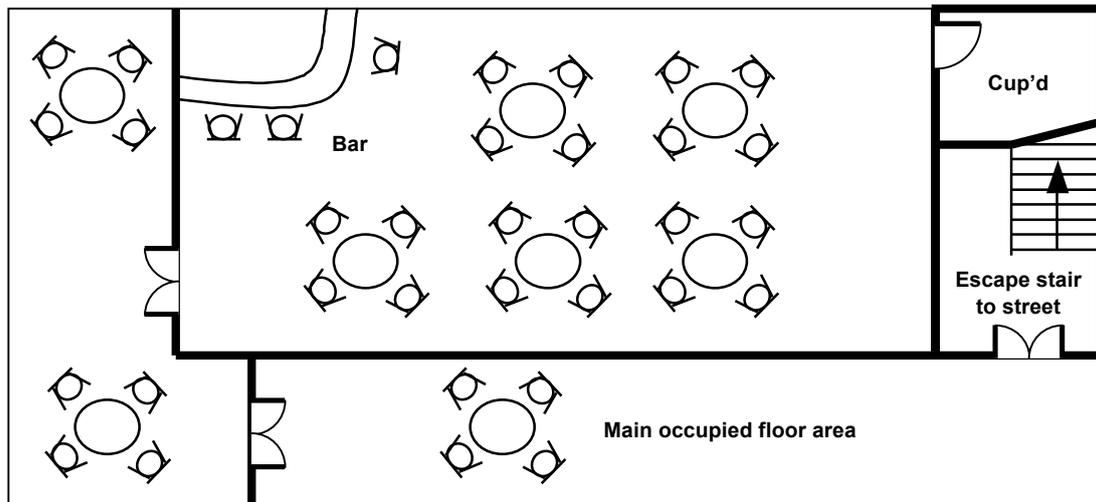


Figure 2

It is very easy to get into all sorts of trouble because we assume things. Ask what happens, get more details, go down to site and have a look, find out why a requirement exists, but whatever happens - do not assume anything!

3. Read all the words

We have all done this as well. It is very easy to interpret something one way if you only read the first paragraph or so. Upon reading the whole item you are likely to obtain an entirely different meaning. This is particularly true of Approved Documents, British and European standards. Read all the words and then decide.

Reading a particular clause in isolation to the remainder of the code can cause another problem. It is important to grasp the whole picture. Read carefully, a word or even a comma can make all the difference.

4. Start at the top

The final item is more in the way of an efficiency device. By following this method you will:-

- Save time
- Be able to analyse jobs more confidently and efficiently
- Present your knowledge more professionally at meetings.

As a general rule the building industry start looking at a set of drawings from the Ground floor. It seems to make sense, as this is how buildings are built. However for analysing means of escape this is the wrong way round.

Let's say you are in a meeting. The ground floor of a building you have never seen before is presented to you. You see a protected stairway, and you see

that the architect has correctly shown the stair discharging directly to the street by way of a protected route, thus protecting the occupants from a ground floor fire. Everything else looks OK. You then go up to the first floor, noting the stair is protected, you point out a few issues with inner rooms and noting that the stairway is the only stair serving the first floor you realise the reception area they had shown on the Ground floor is not acceptable in a single stairway. You return to the Ground and explain this point to the architect. Then go up to the second floor.

At this height you realise that because this is a single stair building, lobbies are needed, so you go back to the first and ground floors and inform the architect that lobbies are needed. Introducing these causes another problem to the Ground floor layout that had not been apparent when you didn't know lobbies were needed. You resolve this layout issue and then move up to the third, then fourth floor. You see that the building needs an alternative means of escape. The applicant had thought of this but the route passes glazing on the lower levels, so back down you go to explain the need for fire resisting glazing adjacent to the external route.

Now lets look what would happen if you had started at the top of the building. You would know from the first drawing how high the building is, and establish that an alternative escape is needed at this height (fourth floor (fifth storey)). Moving down you would establish that only a single stair serves the rest of the building. At third floor level you would know that lobbies are needed on this and the lower floors. Knowing at the beginning that this is a single stair you would be able to advise the architect that cupboards and a reception area are not suitable for single stairways, as soon as you see them. Also knowing that an alternative escape is provided at the upper floor levels prepares you for considering any glazing within 9m below that escape route and you would be able to advise on the way down. The consideration of the escape and your ability to identify the problems will flow in an efficient manner. You will not be jumping between floors in a haphazard way and will be dealing completely with each floor as you move down the building.

Using this technique you will find that people will wonder at your ability to assess the key requirements of a job quickly. In fact you will rise to the challenge of a new set of drawings you have never seen before. However there is no magic formula to what you have achieved, all you have done is identify the key criteria which affects means of escape and this can only be done by starting at the top.

You do also need knowledge of the fundamentals that affect escape. This comes through experience, but codes of practice do not always lay down these fundamentals clearly. However in the column I will be including the occasional article which discusses these fundamentals including the common issues, which arise.

Not only means of escape

The first three tenets are equally useful for all other parts of the Building Regulations. Keep them in mind, make a note of them, pin the note to your wall. If you are sceptical, test if they work. Next time you encounter a problem with a job, review them and I can virtually guarantee that you will find one or more of the tenets have been broken.