CheckPoint

argent HEALTH & SAFETY
Part of the Parabis Group

Argent Health & Safety

Technical Guidance Document V.1

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1 Introduction

This document sets out the technical means by which standards for accommodation to be assessed can be established.

It should be noted that local legislation might prevent the implementation of recommendations made in pursuit of achieving compliance. In such cases consideration will need to be given to the acceptability of the local standards and whether or not these will provide adequate protection for any customer that will be accommodated.

In some instances, the listing of buildings and local preservation requirements can be instrumental in reducing the level of safety provided to an unacceptable standard. In such cases it may be possible to introduce interim or temporary measures that will improve the standard to a reasonable level for use.

Accommodation that meets these technical standards will be considered acceptable for use. Accommodation that does not comply should be risk assessed by a competent person to see whether the property is of, or could be brought up to, an acceptable standard.

2 Certification

Details of the property should be confirmed. This should include:

The name and position of the person responsible for health and safety. Where there is not a nominated individual this responsibility is generally assumed by the owner or senior manager.

The full property address and contact details including telephone number, fax number and email as applicable.

The documentation required as proof to indicate whether a property is operating legally varies from one country to another. Generally there will be some provision within the local licensing system for hotels, hostels and other providers of accommodation to meet certain local standards with regard to the safety of customers.

The reason for requiring the documentation is to confirm that the property is operating legally, not to ascertain the standards for safety, as these will be gauged by the audit procedure.

Such documentation will usually include reference to fire safety and the required levels of food safety for the area.

Evidence should be sought to identify the existence of public liability insurance and that the level is acceptable. The necessity for and the availability of public liability insurance are not uniform worldwide.

Evidence should also be requested to ensure that pest control measures are maintained.

Where original documentation cannot be obtained, a signed statement from the supplier should be obtained indicating that the accommodation meets the local requirements and has current and valid permissions to operate.

3 Fire Safety

3.1 Buildings

To avoid confusion in describing buildings the main elements that contribute towards the fire safety levels should be recorded. There will be two main building types; either open buildings or enclosed buildings. In addition, small buildings are given some consideration within this document. The combustibility of the structure should also be considered.

3.1.1 Open Buildings

These are buildings with corridors that are open to the outside air. The degree of "openness" is subjective since the absence of originally installed windows may be effective in securing the dispersal of smoke. However, for the purposes of assessment, the corridor should be in the form of an open-air walkway, balcony or deck-approach. If there are any corridors or sections of corridors along which customers would have to escape in an emergency that are enclosed, i.e. which are not open to the air, then the premises should not be considered as an open building.

3.1.2 Enclosed Buildings

These are buildings where access to the accommodation rooms is from within the building. This can be directly from a stairway, from a corridor, or from another room. Buildings that are even only partially enclosed should be recorded in this category.

The reason that the information about whether a building is open or closed is required is so that it is possible to decide whether or not smoke can disperse readily should a fire occur in a building.

3.1.3 Small Buildings

Buildings used for limited numbers of people, similar to large houses, will require an individual approach when assessing the level of risk within them. This type of building is generally suited to the accommodation of small numbers of people, generally in a family environment rather than that of a hotel or boarding house. Ski chalets would generally fall outside this category. Small buildings are more likely to be self-catering than staffed.

3.1.4 Buildings in Multiple Occupation

Where the accommodation forms only part of a building, particular care should be taken to ensure that the other parts of the building do not have an adverse effect on the safety of the accommodation areas.

Such properties can include buildings that have shops, restaurants, etc within them that are not owned or controlled by the accommodation provider/hotelier.

It is necessary in buildings of multiple occupation that some agreement is reached whereby the fire warning system and emergency exit planning are designed to ensure that all occupants of the building are aware immediately of any incident which has an effect upon them. This is likely to include the sharing of common elements of the fire warning system.

Additionally, escape routes required for hotel/accommodation staff and customers must be maintained available at all times.

3.1.5 Floors below ground/Basements

Any floors that are below ground level require particular consideration. If a floor is totally below ground, there is no doubt that it constitutes a basement. The means of escape from a basement is usually within the building, by way of a stairway up to the ground floor and then out. If a building is

constructed on a terrace or sloping site, however and the floor below ground level is not completely below ground then this may be either a basement or a lower ground floor. An example of a lower ground floor is where escape can be made from some parts of the floor that are below ground level, directly to outside, without having to go upstairs to the ground floor. Generally, however, all floors below the ground floor should be considered basements.

The following diagrams should provide assistance in deciding whether a floor below the ground floor is a basement or a lower ground floor.

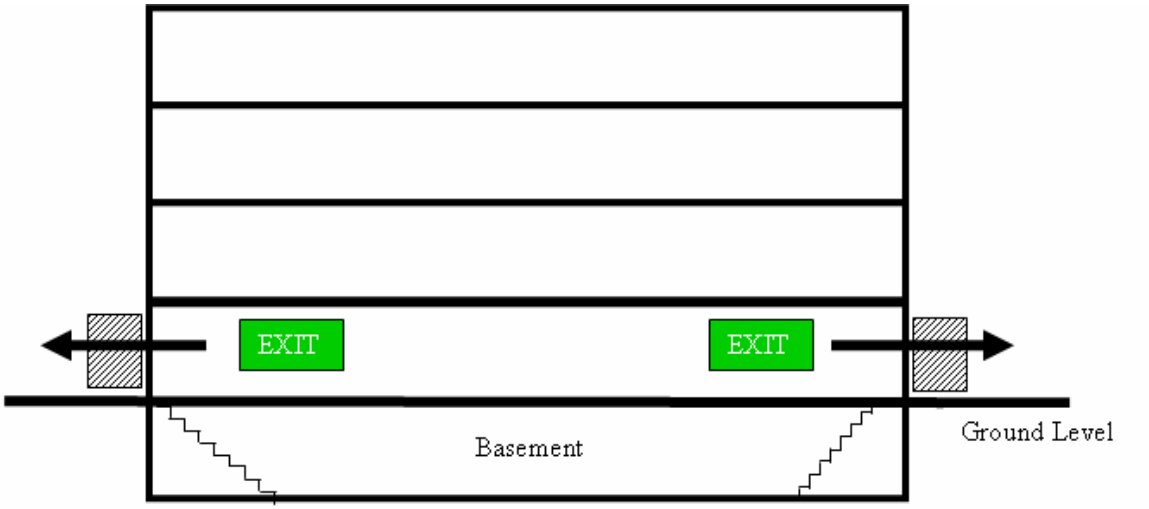

Fig 1: An example of a basement where escape is via the ground level.

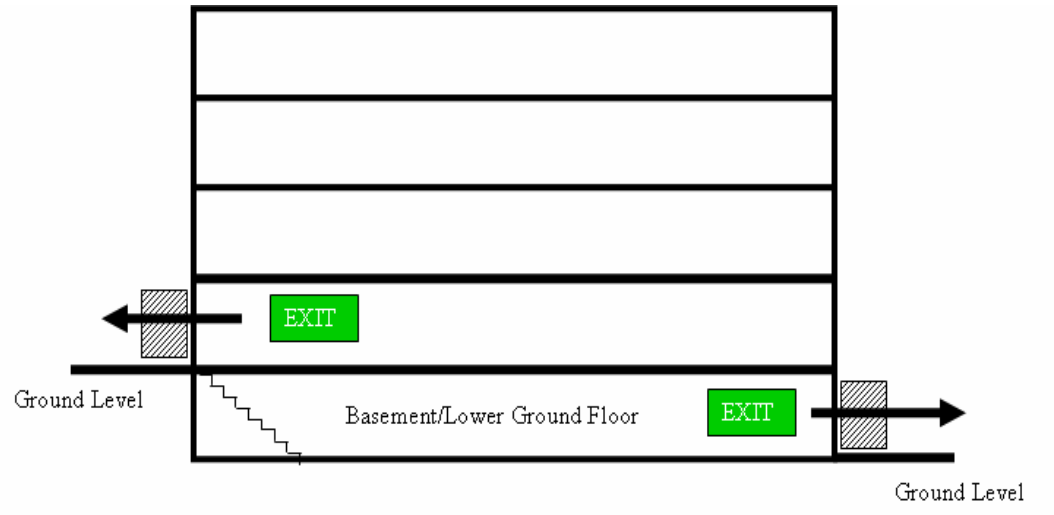

Fig 2: Lower ground floor exit at one side whereas the other is treated as a basement.

3.1.6 Additional Buildings

Where there is more than one building a separate report should be prepared for each building unless the design of the buildings is very similar and there can be no doubt about which building any particular recommendations apply to. Audits should cover all parts of the accommodation used by customers, e.g. restaurants, recreational facilities etc.

In circumstances where facilities that are used by others, for example a public entertainment venue such as a cinema, discotheque or concert venue form part of a property, the effect on that facility

should be considered during the audit. For instance, where the fire escape routes from such a venue go through a hotel the effect on people escaping from the hotel should be considered.

3.1.7 Recording Building Details

The type of building should be recorded and the number of floors above ground (including the ground floor) as well as the number of floors below ground.

The total number of rooms and total bed capacity should also be recorded as these will be required in order to calculate the means of escape requirements, should this be necessary.

3.2 Structural Fire Safety

Buildings should be constructed so as to provide suitable means of escape in case of fire.

3.2.1 Stairways

A stairway can be considered open ventilated and free from any risk of smoke logging if it is completely external to the building, or if there is good ventilation from the stairway directly to open air through an external wall on each floor level.

Any building with floors above the ground floor should have at least two stairways, both of which lead to safety at ground level. In enclosed buildings that are higher than 2 storeys, stairways will also need to be protected as explained below. In addition, people escaping from the building should not need to travel more that 35 metres to get to a place of ultimate safety (outside) or into a protected stairway.

A building can be considered to have sufficient stairways that are acceptably located if:

- There are at least two stairways.
- There are no dead-end corridors in excess of 10 metres in length.
- It is not necessary to travel more than 35 metres from any point in the building to reach a stairway.

Where any of the above conditions is not met, this should be the subject of a risk assessment and it may be necessary for additional stairways to be provided.

NB In open buildings and buildings with a limited floor area a single stairway may be acceptable, but again this should be the subject of risk assessment. Such an assessment should include the presence of compensatory features such as protection, ventilation, automatic fire detection and sprinkler systems.

3.2.2 Protected stairways

Any stairway used for means of escape should be protected in so far as that it should be constructed within an enclosure which is inherently fire resisting. Such stairways should be accessed through fire resisting self-closing doors. Doors to stairways may be held open only by devices linked to the fire warning system (fire alarm), in such a way that will enable the doors to close automatically and immediately upon actuation of the alarm.

Basements often contain areas that present an increased risk for fire. For this reason, where a stairway continues down to basement level, the self-closing doors separating the basement from the stairway should provide a minimum standard of 60 minutes fire resistance.

Ideally, there should be no rooms opening directly into any stairway enclosure. Where this is not possible to achieve, the doors to any rooms that open into the stairway enclosure should offer 30

minutes fire resistance and be smoke stopping and self-closing**.** This is necessary to ensure that smoke from a fire in any of these rooms does not enter the stairway and render it unusable.

In order to provide an early warning of fire in any rooms that open directly into a stairway enclosure and allow customers to make their escape while the stairway can still be used, automatic fire detection in the form of smoke detectors linked to the fire alarm system should be provided in these rooms.

To ensure the safety of people ascending or descending stairways, a handrail should be provided for all main and emergency stairways. If the width of any stairway exceeds 1.2 metres, a handrail should be provided on both sides.

3.2.3 Escape Stairways

Escape stairways are any stairways that serve all, or nearly all, of the floors in a building and that will be considered for means of escape. This can include stairways that are in normal use, such as main, access and staff stairways. Such stairways should be at least 800 millimetres wide with a handrail (one handrail on each side if the stair width exceeds 1.2 metres)

Except for a main stairway; all escape stairways should discharge directly to open air via a risk free area at ground level. A stairway can be considered to discharge directly to open air via a risk free area if an exit;

- is available directly from the stairway, or from the stairway enclosure, out to open air,
- and without the need to pass through any room or other area of the building in order to reach open air.

This is not always possible as some stairways are not located on external walls. Where this is the case, a stairway can still be considered to discharge directly to open air via a risk free area if a protected route is provided from the stairway enclosure out to open air.

A protected route is a passage or corridor provided between the foot of the emergency stairway and the final exit door that is separated from the remainder of the building by fire resisting construction. The partitions or walls forming the protected route and any doors opening into the protected route should provide a minimum standard of 30 minutes fire resistance. The doors should be positively self-closing. Any transoms (fanlights) above fire resisting doors and any glazing opening onto the protected route should also provide a minimum standard of 30 minutes fire resistance and should be in frames fixed shut.

The main stairway should discharge near to the main exit/entrance into an area with limited fire loading otherwise a degree of protection should be provided.

3.2.4 Escape from rooms

When escaping from rooms, people should be able to turn their back on a fire and walk away. That is, they should be able to turn left or right on leaving the room to make their escape. Where this is not possible the escape is said to be in ‘dead-end’ conditions. The maximum length of a ‘dead-end’ within a building should be 10 metres. The 10 metres could be to a position where there are suitable alternative escape routes available, or to a protected stairway, or to a place of safety in the open.

The doors to all rooms in dead-end corridors should be smoke stopping and self-closing. This is to ensure that people in rooms in the dead-end corridor are protected from a fire that occurs in a room nearer to the means of escape. Smoke stopping self-closing doors should hold back smoke from the fire long enough for people in the further rooms to make their escape along the corridor and past the room of origin of the fire to reach the means of escape.

Whilst the acceptable length of a dead-end corridor is 10 metres, under certain conditions it may be possible to extend this distance should some compensatory features be present. These features include engineered fire solutions such as automatic fire detection and smoke ventilation.

In other cases, it may be necessary to provide an additional means of escape from the dead-end corridor. If the dead-end corridor is on the ground floor, an additional exit door to open air may be provided. If the dead-end condition exists on any floor above or below the ground floor, an additional stairway leading to open air may be provided.

Except for very small rooms, an alternative escape route should be provided from all public areas and rooms. That is, there should be at least two independent ways out of them to open air. Where it is necessary to provide an additional exit door from the public areas or rooms, the door should be sited remotely from the existing doors so that all doors are unlikely to be made unusable by a fire at the same time.

If the building has a basement that contains rooms or other facilities that are used by customers, there should be at least two alternative exits from the basement and the same standard for means of escape as described above should be applied to these areas.

Where any of the above conditions is not met, this should be the subject of a risk assessment.

3.2.5 Escape routes

Corridors, stairways and other normal circulation routes become escape routes when considering escape from fire. All such routes should be maintained clear of obstruction at all times in case there is an emergency and people need to leave the building quickly. It is appreciated that these routes may become partly restricted during certain periods, e.g. during the cleaning of rooms and when maintenance is being carried out. Such restrictions should be kept to a minimum and should not be allowed to block an escape route completely.

Staff training should emphasise the effect that day-to-day work routines and practices could have on the means of escape and how such effects can be minimised. In particular staff must be trained in ensuring that equipment does not block automatic doors etc. Where it is impossible to carry out work without this having an effect on escape routes, additional risk assessment should take place to ensure that the risk caused by such actions is controlled.

3.2.6 Doors

In order to ensure that they can be used easily in an emergency and do not delay people trying to escape from the building, doors on escape routes, including final exit doors, should be made and maintained easy to open from the inside at all times. Final exit doors should lead directly to open air and be secured by means of a panic latch type fastening (push bar) or other suitable opening method designed for quick and easy use. It should not be necessary to use a key or any other device which needs to be manipulated to open a door on an escape route.

Keys in boxes are not acceptable for opening doors on escape routes, including final exit doors, because they are often lost or removed and so not in place when needed. When people are trying to use the keys to open doors in an emergency, the keys may be dropped and not easy to find on the floor. This is particularly the case in smoke, or when numbers of other people, some who may be in a panic, are also trying to use the doors to make their escape.

Ideally, electronic locks should not be used on doors on escape routes, including final exit doors. If they are fitted, they should be provided with an override button or switch close to the door that opens the door when pressed. A notice indicating this should be provided near to the button. The electronic locks should also be connected to the fire alarm system in such a way that the doors open when the fire alarm is actuated. The doors should also fail safe in the open position in the event of a failure of the mains electrical power supply.

Generally all doors on escape routes should open in the direction of escape. This may, on occasion, require that some doors be double swing. Where doors are only likely to be used by limited numbers of people, they may (following a risk assessment) be acceptable opening in the opposite way.

Where security is an issue, measures put in place to manage security should not affect escape. It is possible to prevent people entering from outside whilst maintaining easy access to escape routes. The use of panic bars can help to ensure security whilst maintaining the escape route available at all times.

All final exit doors should be kept clear of obstruction externally. Where it is likely that a final exit door may be obstructed externally, signage should be provided on the outside of the door advising that the door is a fire exit and should not be obstructed. In extreme cases, it may be necessary to provide barriers to ensure that final exit doors are not obstructed externally.

3.2.7 Smoke stopping doors

All doors protecting escape routes (this will include doors to stairways, other self-closing doors and bedroom doors in some dead-end corridors etc…) should be effectively smoke stopping. This can be achieved by fitting smoke seals to the doors. Where fire-resisting doors are required, these should be fire resisting as well as smoke stopping.

3.2.8 Smoke Spread

Where corridors exceed 30 metres in length, the corridors should be sub-divided by self-closing smoke stopping doors and partitions to reduce the spread of smoke should a fire occur. Such doors provide benefit to people escaping from fire by reducing the distance they may have to travel while exposed to the effects of smoke. They also limit the damage caused by smoke in the event of a fire within a building.

Partitions fitted to restrict smoke spread should extend across the corridor and should go to true ceiling level, i.e. where suspended or false ceilings are fitted, the partitions should extend through the void above the ceiling to the structural ceiling above.

3.2.9 Risk Rooms

The use of some rooms presents an increased risk of fire. The partitions and doors separating kitchens, laundries, electrical switch rooms and boiler rooms from the remainder of the accommodation should provide a minimum standard of 60 minutes fire resistance. The doors should be positively self-closing. The partitions and doors separating cleaner's or housekeeping stores from the remainder of the accommodation, should provide a minimum standard of 30 minutes fire resistance. The doors should be positively self-closing.

If preferred, the doors to boiler rooms, electrical switch rooms and cleaner's or housekeeping stores need not be self-closing, but must be kept locked shut when not in immediate use.

Basements often contain risk rooms and areas that present an increased fire risk. For this reason the floors, ceilings, partitions and doors separating the basement from the remainder of the building should provide a minimum standard of 60 minutes fire resistance. The doors should be self-closing.

Any holes in the floors, ceilings and partitions separating the basement and/or risk rooms from the remainder of the building, including gaps around pipes, ducts and cables passing through them should be sealed with fire resisting materials.

Boilers should be provided with an automatic fuel shut off valve that will cut off the supply of fuel to the boiler in the event of a fire, and so reduce the chance of a fire developing.

The provision of an automatic fire suppression system in the boiler room can also help in reducing the development of a fire involving the boiler room. An automatic fire suppression system is a system that actuates in the event of a fire and discharges an extinguishing medium, for example dry powder, onto the fire thus extinguishing or reducing the fire.

3.2.10 Fire Separation and Fire Loading

In many buildings, vertical service shafts are provided to allow the passage of pipes and cables etc. between the floors of the building. In the event of a fire, these shafts can allow smoke and flames to pass between the floors and spread the fire. Measures should be put in place to ensure that this cannot happen.

The best way to achieve this is to 'fire-stop' each shaft at each floor level. This is achieved by sealing the inside of the shaft, at the level of each floor of the building, with materials providing a minimum standard of 30 minutes fire resistance.

An acceptable but less effective alternative is to enclose the vertical shafts throughout their height with materials providing a minimum standard of 30 minutes fire resistance. The existing walls enclosing these shafts will invariably provide the necessary standard of fire resistance but the doors, hatches etc. provided in the walls to allow access to the shafts often do not.

If the shafts are not fire-stopped at each floor level, it should be ensured that the doors and hatches etc. giving access to the shafts are kept locked shut. Any glazing in the walls of the shaft, or in the access doors, hatches etc. should be fire resisting.

The surface linings or surface coverings of walls can greatly increase the fire loading in a room, escape route and in the whole building, as can the provision of furniture, curtains, drapes and other fabrics. Particular problems can be caused by the use of timber, carpet, flock type wallpaper and polystyrene tiles on the walls and ceilings. The use of decorative features such as draped fishing nets or crumpled paper, sprayed with paint to create a theme, will also aid the rapid spread of a fire. However, walls and ceilings painted only with emulsion type paints do not add to the fire loading.

All surface linings and surface coverings should have low surface spread of flame characteristics. That is, if a fire occurs and flames impinge on the walls or ceilings, flames will either not spread across the linings or coverings, or if they do so they will spread only very slowly.

If the surface linings and surface coverings do not have inherent or "built in" low surface spread of flame characteristics, some linings or coverings can be treated to provide this. The treatment is specialised and should only be carried out by a professional, who should provide a certificate to show that the lining or covering has been treated.

Ideally, all upholstered furniture should be constructed from combustion modified foam, which does not burn easily. Where this is not the case, the fabric covering of the furniture should be inherently flame retardant, or else it should be treated to make the covering flame retardant, to ensure that it cannot be easily set on fire. The treatment is specialised and should only be carried out by a professional, who should provide a certificate to show that the covering has been treated.

Any furniture that has torn fabric covering should be replaced as it can more easily be set on fire than furniture with intact covers.

3.2.11 Atria

An atrium is a space or opening within a building that passes through one or more structural floors. The space or openings between each of the floors do not have to be vertically aligned, that is one opening immediately above the other. The openings can be offset to each other.

Although a stairway enclosure passes though one or more structural floors, a stairway enclosure, by definition, is not an atrium. Nor is a lift shaft.

If well designed, an atrium can be as safe as any other building design. Problems can arise, however, when an atrium extends between more than two floors if there are significant “high fire load” areas opening into the atrium, such as back of house areas and public areas.

The scientifically proven method of protecting people from the effects of a fire in an atrium is the provision of a smoke control system consisting of good ventilation in the atrium, coupled with the provision of automatic sprinklers to control any fire that does occur.

The design of an effective ventilation and sprinkler system for use in an atrium involves the use of computer models and complicated calculations. This is a specialised area and the advice of qualified experts should always be sought.

Where a smoke control system is in place, it should be serviced annually by a qualified engineer and a certificate should be obtained as to the system's worthiness. The results of all servicing should also be recorded in a logbook.

It should not be assumed that the presence of permanent ventilation openings in the roof will provide adequate ventilation and ensure safe conditions in the event of a fire.

The introduction of furniture and other flammable materials into the base of an atrium increases the fire loading within the atrium. The risk can be greatly reduced by removing or reducing the amounts of these materials.

Where there are “high fire load” areas such as back of house areas, or public areas opening into the atrium, the risk to people in the atrium can be greatly reduced by separating these areas from the atrium using fire resisting partitions or walls and self-closing doors.

Another satisfactory way of reducing the risk would be to separate the “high fire load” areas from the atrium using automatic fire shutters and/or providing automatic sprinklers in these areas.

Typically, guest rooms open directly onto the atrium walkways. In the event of a fire, this leaves people on the walkways exposed. If the doors to these bedrooms are fire resisting and self-closing, or at least smoke stopping and self-closing, this also reduces the risk of a fire in the bedrooms affecting people in the atrium.

If the travel distances from rooms within the atrium to open air, or to a protected stairway etc. are longer than 35 metres, it may be necessary to reduce these distances to a more reasonable level by providing an additional means of escape. For rooms above, or below the ground floor, this might mean providing an additional stairway. From rooms on the ground floor, it may be necessary to provide an additional exit door leading from the atrium out to open air.

Customers accommodated in rooms within corridors off the atrium are at a greater risk from a fire in the atrium unless there are adequately protected escape routes from these corridors that are

independent of the atrium. That is, customers accommodated in the corridors should be able to make their escape in the event of a fire by using an escape route without having to enter the atrium to do so.

Where corridors lead into the atrium, they should be separated from the atrium by doors that are fire resisting and self-closing, or at least smoke stopping and self-closing. This will reduce the likelihood of smoke from a fire in the atrium entering the corridors, or from a fire in the corridors entering the atrium.

3.3 Fire Warning System

An electrical fire warning system should be provided in all properties, except in very small buildings. (See reference to manual fire warning system and domestic smoke alarms below).

The fire warning system should have;

- Manual Call Points
- Sounders
- Control Panel with battery back up

The fire warning system may also include;

- Automatic fire detection
- Door restraining devices
- Switching to control ventilation systems
- Other devices to assist disabled people

3.3.1 Manual Fire Warning System and Domestic Type Smoke Alarms

In small open buildings, or complexes of small open buildings, a simple manual fire warning system such as a hand operated gong, bell, klaxon, whistle or similar device may be acceptable. The manual warning system must be audible throughout and in a complex, warning devices should be located within 30 metres of all accommodation buildings.

In small enclosed buildings, domestic type smoke alarms may be suitable as a fire warning system. Where provided, it is particularly important to consider other fire protection features to assess their overall suitability. Where they are provided they should be audible throughout the property. In some properties it may be necessary to have more than one alarm to ensure good audibility throughout. Where more than one alarm is provided, they should be interlinked so that the activation of smoke alarm will sound all.

Domestic alarms should be tested on a weekly basis to ensure batteries are fully operational. The results of the tests should be documented.

3.3.2 Manual Call Points

Often called break-glass points, manual fire alarm call points should be provided adjacent to all final exits from the building and all storey exits.

Call points should be sited approx 1.4 metres above finished floor level.

In addition to the above, it should not be necessary to travel more than 45 metres to get to a call point. This means that in long corridors and large rooms additional call points may be required.

Individuals raising the alarm should be able to do so whilst making an exit from the building and should not have to go further into a building to raise an alarm.

3.3.3 Sounders

Fire alarm sounders could be bells, sirens, klaxons, another electronic sound or something similar. Whatever sound is chosen it should be a distinctive sound from other alarms and all sounders should be of the same type throughout the property.

Sounders should be audible throughout the property. They should also be sufficiently loud to wake people who are asleep (Circa 75dBA at all bed heads). Where sounders do not give the required sound level it is usually better to provide additional sounders rather than to increase the volume of existing sounders. Note that when the alarm sounds, doors which are normally open may be closed and this may have an effect upon the sound level in some areas. This should be taken into account when the sound levels are determined.

In some very large buildings the public address system may be used as part of the fire warning system. When this is the case, the public address system should be linked into the fire alarm system in such a way as to ensure that its operation is fully automatic in the event of a fire. The linked fire alarm and public address system should incorporate a pre-recorded message, in English and other relevant languages, providing customers with specific details of the emergency and the action to be taken.

If the fire alarm system is actuated, people with hearing impairments may not hear the alarm. In order to ensure the safety of such people, a system linked to the fire alarm system and incorporating flashing beacons and vibrating pillows should be provided. Alternatively, a system should be put in place to ensure that any such person is separately contacted by a member of staff, in the event of a fire.

3.3.4 Control/Indicator Panel

Every fire alarm system should incorporate a control or indicator panel. These panels vary as to their sophistication and technical specification. At its most basic, a control panel will be a simple box featuring a series of warning and indicator lights. At the other extreme, control panels are highly sophisticated, technical, self-monitoring, addressable computerised systems.

The panel should be provided with a standby battery backup system. In smaller systems the batteries are normally contained within the panel; in older or larger systems there may be a separate box. The management should be able to advise the whereabouts of the backup batteries.

The panel should be able to indicate the approximate position of a fire alarm actuation point, whether it is a call point or detector head. In the simple systems the indication will usually be by zone or area. In more complicated addressable systems, the specific location of the call point or detector head that has actuated will be indicated.

The control or indicator panel should be sited in a location where it can be constantly monitored, usually at reception or occasionally in a permanently staffed security room; so that staff will be immediately aware if the alarm is actuated. If the panel is not located where it can be constantly monitored, either the existing panel should be relocated, or a mimic panel should be provided in a permanently staffed area.

3.3.5 Automatic Fire Detection

Automatic fire detection linked to the fire alarm system provides the best chance of an early warning of fire.

Automatic fire detection will normally be of either smoke detection or thermal (heat) detection placed throughout a property. Smoke detectors are the best type of detectors for use in bedrooms, corridors, public areas and offices. Thermal (heat) detectors are more suitable for use in boiler rooms, kitchens, laundries, workshops and other similar areas where smoke, steam, dust etc. may be present.

In some properties, specially designed fire detection systems may be provided, such as beam detection or air sampling devices to protect atria.

Domestic type smoke alarms can be useful for providing an early warning of fire to the occupants of rooms and apartments with cooking facilities if no linked automatic fire detection is provided in these areas. The smoke alarms should be sited in the sitting area and the types that are permanently wired into the electricity supply are preferable to those that are powered only by batteries.

Domestic type smoke alarms in accommodation generally can only ever be considered as a temporary measure until automatic fire detection linked to the fire alarm system is provided as they will only sound an alarm locally and not throughout the property.

3.3.6 Sprinklers

Sprinkler systems may occasionally be provided in accommodation. A sprinkler system may be total and provided everywhere in the building, or partial, in only some parts of the building. An annual examination of the sprinkler system should be carried out by a competent engineer. A certificate confirming the worthiness of the system should be obtained.

Where sprinkler systems are provided, activation of a sprinkler will often activate the fire warning system in the same way as electronic devices, in addition to actuating a sprinkler alarm. Unfortunately, this does not provide a satisfactory replacement for automatic fire detection in the form of smoke or thermal (heat) detectors. This is because sprinklers do not actuate until the temperature in the building has reached quite a high level, whereas automatic fire detectors, particularly smoke detectors actuate very quickly.

3.3.7 Door restraining devices

Where doors are required to protect or separate areas in order to contain an outbreak of fire they need to be kept closed at all times. However, in order for a building to work properly, it is often impractical to leave doors in the closed position.

Magnetic and other restraining devices are commonly used to keep these doors in the open position. The operation of the fire alarm should release such devices allowing them to close immediately on the activation of a call point or other detector. This release should always occur on stage one of any staged alarm system.

The use of cabin hooks, wedges and other devices that do not release on actuation of the fire alarm system are not acceptable because in the event of a fire, doors held open by these devices will not close and will allow smoke and flames to spread freely.

3.3.8 Staged alarms

The most appropriate type of fire alarm system for hotels and other holiday accommodation is a single stage fire alarm system, where the general evacuation alarm sounds immediately when a call point or detector head is actuated. The provision of a single stage system will reduce delays in informing customers if a fire should occur.

In order to allow time to investigate the cause of an alarm, some properties will have systems that operate on a ‘staged’ basis. Stage one should provide an initial alert signal, which is a warning at the fire alarm control panel that a call point or detector head has been actuated. Stage one should also activate any control equipment such as door release mechanisms or ventilation controls that are linked to the fire alarm and detection system.

Stage two of a staged alarm system should sound a general evacuation alarm throughout the premises.

Where a staged alarm system is installed it should be programmed in such a way that stage two, the evacuation stage, automatically sounds the general evacuation alarm, without human intervention, after a set period of time if the initial alert signal has not been investigated and the system reset. The time generally accepted for the delay is a maximum of four minutes although this can be the subject of risk assessment.

3.3.9 Testing

Fire alarms and associated equipment should be subjected to frequent and regular testing (at least monthly). Additionally, a competent engineer should subject systems to an annual maintenance and test. The results of each test should be recorded in writing and test logs should be retained for examination when requested.

In order to avoid confusion and unnecessary disturbance, advice should be provided for customers and staff, to inform them when fire alarm tests are being carried out. This advice should include the date and time of the test and details of any signal which may be given to indicate that the system is back to normal.

3.3.10 Evacuation Drills

Full evacuation drills should be carried out at least once in every six-month period, to ensure that members of staff are fully aware of the evacuation procedures and that evacuation plans can be successfully implemented. The co-operation of customers should be sought but the participation of all customers is not essential.

3.4 Signs and Notices

Signage is essential to ensure that the means of escape can be identified and used, and that notices are provided to make people aware of any emergency procedures which have been planned by the management of the property.

To prevent any language difficulties signage should be supported by relevant pictograms. Fire escape signage should be highly visible and easy to understand in acceptable colours according to local legislation. In the EU for example, these will generally be in the standard colours of white lettering, of sufficient size to be seen, on a green background.

Signs should be provided to indicate all escape routes from the building all the way out to open air.

In particular, the route to all emergency stairways and the doors leading into the stairways should be indicated by signs, which incorporate directional arrows where appropriate. Once on the stairway, signs should be provided to indicate the route down the stairway and all the way out to open air.

Signs should be provided throughout the public areas of the building to indicate the escape routes from these areas out to open air.

A sign stating “EXIT” or “FIRE EXIT” should be provided on all final exit doors leading out from the building to open air.

Signs should also be provided to indicate, except where they are obvious, the position of;

- Fire fighting equipment
- Fire alarm call points
- Assembly point

Action in case of fire notices should be provided on the back of all bedroom doors. The notices should be in English and other relevant languages and include a simple floor plan and details of an assembly point, to which customers should report in the event of an emergency.

3.5 Emergency lighting

In addition to the normal or primary lighting, emergency lighting should be provided throughout the building. This should ensure adequate illumination if the mains electrical supply should fail for any reason, including the occurrence of a fire.

The provision of satisfactory emergency lighting can usually be achieved by using self-contained lighting units, constantly trickle-charged by the main's electrical supply.

The constant trickle charging will ensure that the batteries that provide power to the lighting units in the event of a failure of the mains electrical supply are fully charged and ready for use.

Emergency lighting should be designed to operate on the failure of local lighting circuits and not just on total electrical mains failure.

The emergency lighting should operate on the failure of local lighting circuits and not just on total mains failure because local lighting circuits are often damaged by a fire.

The failure of a local lighting circuit will affect only one area of a building but without causing a total mains failure. If this happens and the emergency lighting system is designed only to recognise a total mains failure, the system will not recognise that there is a problem and the emergency lighting will not illuminate.

Generators are often used to provide back-up power to some lighting units in the event of a failure of the electrical mains supply. Generators are not suitable to provide power for emergency lighting, however, as they do not usually operate unless there is a total mains failure.

In addition, a generator uses the same wiring circuits as the mains electrical supply. If the wiring of a lighting circuit is damaged by a fire any lights attached to the damaged circuit will not work whether the power is being provided by the mains supply or by a generator.

Emergency lighting should cover;

Escape Routes including,

- External sections
- Changes in direction
- Changes in level

Positions of,

- Fire fighting equipment
- Emergency switching

Emergency lighting should be tested monthly, with a check by a competent engineer being carried out annually. The results of all tests should be recorded.

3.6 Fire Fighting Equipment

Whilst fire-fighting equipment is generally provided for use by trained staff, it should be available throughout the property.

In simple premises having one or two portable extinguishers of the appropriate type, readily available for use, may be all that is necessary. In more complex premises, larger numbers of portable extinguishers may be required and they should be sited in suitable locations, e.g. on the escape routes at each floor level. It may also be necessary to indicate the location of extinguishers by suitable signs.

Suitable fire extinguishers should be provided. For general-purpose use, water extinguishers are preferred. Extinguishers should be available within 30 metres of any position in the property. Hose

reels may also be provided in some areas, however these are really only for the use of staff. Where provided, hose reels should be in addition to extinguishers and not as a substitute for them.

Main kitchens should have suitable fire extinguishers, which would normally include a foam type extinguisher plus a fire blanket or chemical extinguisher if there is a deep fat fryer present.

Apartment kitchens should also be provided with a fire blanket in container, or a chemical type extinguisher. These should be sited adjacent to the exit from the kitchen or cooking area.

It is important that all fire fighting equipment is maintained regularly by a competent person. Normally this is conducted annually. Occasionally, to comply with local legislation, this may be bi-annually. A record should be maintained of all tests and maintenance carried out.

Guidance on the various extinguishers available and their suitability is provided in Appendix 1

3.7 Fire Prevention

Whilst the fire safety measures above help to ensure that people can get out of a building safely, should a fire occur it is important that due regard be given to preventing fires in the first place.

3.7.1 Storage

The storage of combustible and other items should be such that there is no storage within escape routes. All storage should be separated from escape routes by fire resisting construction. This includes the storage of bedding, cleaning materials etc.

Storage cupboards should be locked to prevent unauthorised access. They should also preferably be fitted with automatic fire detection where such storage cupboards could have an effect upon the means of escape.

3.7.2 Electrical Safety

As electrical systems are a major cause of fires it is important that the integrity of the electrical system is maintained. All staff should be encouraged to report any electrical defects that they find. If there are any concerns as to the condition of any electrical appliances, vending machines, games machines, sockets, plugs and switches, they should be taken out of use immediately and should not be brought back into use until any defects have been rectified by a competent and qualified person.

The electrical installation should be checked annually by a competent and qualified person, who should provide a certificate of worthiness, or other certification/ documentation, to show that the installation is satisfactory.

In order to provide electrical protection and allow the electrical supply to be isolated when necessary, each bedroom/apartment should be provided with an individual electrical fuse box and main cut-off unit, suitably protected with a residual current device (RCD).

3.7.3 Shops

Shops are frequently found within hotels. These can vary from a small gift shop in the reception area to what can be considered a shopping centre or mall. Shops often contain large quantities of highly combustible materials.

The best way to reduce the risk presented by such shops is to provide fire resisting construction, including self-closing doors between the shops and the remainder of the hotel. At the least, smoke detectors linked to the hotel fire alarm system should be provided to ensure that an early warning is given in the event of a fire in the shop.

3.7.4 Heating and Air Conditioning

Any heating system provided should be of a safe type. A low pressure water system comprising a central boiler linked by pipework to radiators throughout the building is generally considered the safest type of system.

If individual heaters of any type are provided, these should always be fixed to the wall to ensure that they cannot be knocked over and cause a fire. If heaters are of the electric type, a warning notice should be provided on or near to the heaters warning people not to place towels or clothing on the heaters.

Open fires that burn coal, wood or other carbonaceous material are sometimes found in accommodation. Ideally open fires should not be used by customers but where they are used at all, they should be permanently protected by a close mesh fire guard.

Only sufficient fuel for one day's use should be kept *inside,* and located in a place where there is no risk of ignition by flames, sparks or heat from the fire. All other fuel should be stored outside.

Gas cylinders are also sometimes used to provide fuel for heating systems. Ideally, these types of system should be replaced with a heating system of a safer type. Where the system is to be retained, however, the gas cylinders should be removed to outside of the building and gas should be piped in from the externally located gas cylinders to the heaters.

Air conditioning systems are often used to provide heating during cold weather and cooling during hotter weather. The air conditioning system should also be of a safe type.

Individual air conditioning units that are completely independent rather than connected to a central system are generally considered safe.

Fan coil type systems, in which hot or cold water is piped around the building and a fanned unit in each room blows air across the pipes and into the room are also considered generally safe.

Of more concern are "ducted" systems, where hot or cold air is passed around the building through ducts. This type of system could pick up smoke or flames from a fire in one area of the building and carry them through the ducts, thus spreading the fire to other areas of the building.

This risk can be reduced by connecting the air conditioning system to the fire alarm and automatic fire detection system in such a way that the air conditioning system is switched off as soon as the fire alarm or detection is actuated and also by providing dampers within the ducts that close when these systems are actuated. Dampers are small doors within the ducts that are normally open but seal the ducts completely when closed.

3.7.5 Bedrooms/Apartments

Ideally, the doors to all bedrooms and apartments should be fire resisting, or at least smoke stopping and self-closing. This would ensure that a fire within a particular room or apartment should not affect the remainder of the building until people have had the chance to make their escape.

This becomes more important where there is a higher risk, for example where the bedrooms or apartments open into an atrium, into long dead-end corridors, or into stairway enclosures.

3.7.6 Kitchen

Accumulated grease on filters and within the cooker hood vent shaft is a major cause of kitchen fires. Regular de-greasing reduces this risk and should be regularly carried out. De-greasing should take place at least once a month.

The use of LPG (liquid petroleum gas) cylinders is common in many hotel kitchens where connection to a mains gas supply is difficult or not available. LPG cylinders can add significantly to the intensity of any fire. For this reason, cylinders should not be stored in the kitchen, but should be kept in a well-ventilated and secure storage area or cage away from the building and from sources of ignition.

The gas should be piped into the kitchen from an external source. Gas shut off points should be provided and clearly identified so as to quickly turn off the flow of gas in the event of ignition or leak. In order to ensure that they can be used at all times, the gas shut off points should be sited away from any heat source.

Fire blankets are an essential part of the fire fighting media within a kitchen.
Ideally they should be located in a position where they are easily accessible for use on deep fat fryers.

3.7.7 Disabled Customers

Most properties now accommodate disabled customers, either in ordinary guest rooms and apartments, or sometimes in specially adapted rooms and apartments for disabled customers. For ease of access these rooms are often on the ground floor, or on other low floors.

If a property provides accommodation for disabled customers, there should also be a written policy detailing the procedures to be followed for the assistance and evacuation of disabled customers in the event of an emergency. As part of the regular staff training programme, staff should also receive instruction in the procedures and the use of any specialist equipment provided for the purpose.

3.7.8 Discotheque/Entertainment Area

There are many past cases of fires resulting in fatalities occurring in discotheques and places of entertainment throughout the world. For this reason, special consideration is necessary when considering fire safety in these areas.

In many countries, the authorities impose a maximum capacity on the number of people allowed in discotheques and entertainment areas at any one time. Where this is the case, this capacity should be adhered to in order to ensure compliance with local regulations.

It is also necessary, however, to calculate the number of people that it is safe to allow in the area, taking into account the floor area and the number and widths of the available means of escape, that is the exit doors and any stairways and corridors along which people leaving the discotheque/entertainment area in an emergency would have to travel.

Where the means of escape are inadequate for the number of people that could congregate in the area, additional exits, stairways and corridors will have to be provided. Unless and until the additional means of escape are provided, it will be necessary to restrict the number of people allowed in at any one time.

In order to ensure that they can be used easily in an emergency and do not delay people trying to escape from the discotheque and the building, doors on escape routes, including final exit doors should be made and maintained easy to open at all times. It should not be necessary to use a key or any other device which needs to be manipulated to open a door on an escape route.

Keys in boxes are not acceptable for opening doors on escape routes from the discotheque/entertainment area, including final exit doors because they are often lost or removed and so not in place when needed. When people are trying to use the keys to open doors in an emergency, the keys may be dropped and not easy to find on the floor. This is particularly the case when there is smoke, or when a number of other people, some who may be in a panic, are also trying to use the doors to make their escape.

Electronic locks should not be used on doors on escape routes, including final exit doors, from the discotheque/entertainment area under any circumstances.

All doors on escape routes from the discotheque/entertainment area must open in the direction of escape. This may, on occasion, require that some doors be double swing.

Where security is an issue, measures put in place to manage security should not affect escape from the area. It is possible to prevent people entering from outside whilst maintaining easy access to escape routes. The use of panic bars can help to ensure security whilst maintaining the escape route available at all times.

All final exit doors from the discotheque/entertainment area should be kept clear of obstruction externally. Where it is likely that a final exit door may be obstructed externally signage should be provided on the outside of the door advising that the door is a fire exit and should not be obstructed. In extreme cases, it may be necessary to provide barriers to ensure that final exit doors are not obstructed externally.

In order to ensure that exit doors leading from the discothèque/entertainment area where the primary lighting may be dimmed or extinguished can be clearly seen, each door should be illuminated by self-contained, emergency lighting units that are constantly trickle-charged by the main's electrical supply and placed above the door.

The lighting units should be of the maintained type, which are permanently lit. Doors should be indicated "Exit", preferably by means of a "Running-Man" type sign, incorporated in the lighting unit, or by a sign placed above the door, close to the lighting unit, so that it is illuminated.

A major factor in fires in discotheque/entertainment areas has been a delay in staff raising the alarm. In order to ensure that any fire is detected quickly and an early warning of a fire is given, automatic fire detection in the form of smoke detectors, centrally mounted at ceiling level and linked to the fire alarm system, should be provided and sited throughout the area.

It is necessary to ensure that the fire alarm system in the discotheque/entertainment area can be heard above the sound of the entertainment. The fire alarm system should be tested, during a performance, to ensure that its audibility level is at least 5dB above the ambient noise level in the area. If necessary, additional fire alarm sounders should be provided to ensure that this level of audibility is achieved.

To ensure that the fire alarm can be heard, the sound system in the discothèque/entertainment area should be linked to the fire alarm system in such a way that the sound system switches off, or is silenced, when the fire alarm is actuated.

In the event of a fire in the discotheque/entertainment area, it is possible that wall, floors and ceiling linings and drapes could cause the fire to spread very quickly and overtake people trying to make their escape. For this reason, the use of carpet, flock wallpaper, polyurethane tiles and fabrics should be avoided. These materials should be removed unless they are either inherently fire retardant, or are treated to make them so. If these materials are to be retained, a certificate should be obtained to certify that the materials are inherently fire retardant, or have been treated to make them so.

Any upholstered furniture within the discothèque/entertainment area should be fire retardant or non-flammable. Where this is not the case, the furniture should be removed, or replaced with, furniture that is fire retardant or non-flammable. Alternatively, the furniture should be treated to make it fire retardant or non-flammable. A certificate should be obtained to certify that the furniture is fire retardant or non-flammable.

Upholstered furniture which has damaged, torn or worn coverings, can easily be ignited. Any furniture that has this type of damage should be repaired or replaced to reduce the risk of fire being accidentally started in the furniture by smoking materials etc.

Stage areas can present particular fire hazards due to the presence of scenery, props, costumes etc. For this reason, smoking should not be allowed in stage areas. Notices stating “No Smoking” should be provided throughout the stage areas.

Suitably trained stewards, or security guards, should be on duty in the discothèque/entertainment area, when this area is in use.

In case of a fire in the discotheque/entertainment area, fire fighting equipment in the form of six kilogram dry powder extinguishers should be provided throughout the discothèque/entertainment area, including the backstage areas.

Fire blankets in containers should be provided in the stage areas and in dressing rooms.

3.8 Staff Training and Emergency Procedures

A written fire emergency procedure and fire safety policy relevant to the size and type of the property should be drawn up to ensure that management and staff are aware of their responsibilities with regards to fire safety, particularly the safety of customers if a fire should occur.

Staff should receive training appropriate to their level of responsibility and commensurate with their position.

It is also appropriate that, following such training, guidance notes be prepared to assist staff to fulfil their roles effectively.

All training given and received should be recorded in writing and such records should be available for examination.

This training should be carried out at least twice a year for day staff and four times a year for night staff

Where an alert staff presence is not maintained for 24 hours per day, the fire drills and safety briefings should take this into account.

It is good practice to carry out regular checks on all parts of the premises during the hours of darkness. It is important to include all major risk rooms as part of the check i.e. kitchens, boiler rooms, laundry etc. and also restaurants, bars and other public areas. At the same time as the first check is made, the fire doors protecting all stairways should be closed.

Some properties have an “in house” fire fighting team. The job of this team is to fight the fire and assist with evacuation. It is important that the fire fighting team should be trained on a regular and routine basis. A competent person should deliver the training and the details of all training should be recorded, in writing, in a logbook.

A plan of maintenance must be in place to ensure all equipment and areas of public and staff use are maintained in a safe condition. All maintenance should be carried out by suitably trained personnel and documented. Regular checks should be carried out and documented by trained staff to ensure the plan is properly implemented.

4 General Safety

4.1 Lifts

During a fire, there is a danger that lift cars could stop at the floor involved in the fire and that the doors open exposing any occupants of the car to the fire. People should be advised that the lifts should not be used in the event of fire and a pictorial sign stating "Do Not Use The Lift In The Event Of Fire" should be provided and sited at the entrance to each lift on each floor.

In some lift cars, it is possible that carelessly discarded smoking materials could fall out of the cars and into the lift shaft. If this happens there is a danger that combustible materials and grease etc. in the lift shaft could be ignited. For this reason, smoking in the lift cars should be prohibited and a pictorial sign stating “No Smoking” should be provided and sited at the entrance to each lift on each floor.

It is not necessary to provide the “No Smoking” signs if the whole building is non-smoking.

There is a danger that children using the lifts unsupervised could be injured by the doors as they open and close automatically, or could become trapped in the lift car in case of a fault. A pictorial sign stating “No Unaccompanied Children” should be placed outside each lift on each floor.

In older building types, lift cars that are open on one or two sides are sometimes found. The risk of this design is that the walls on the unprotected sides of the cars are exposed and as the lift cars ascend or descend creates a “moving wall” effect. It may be possible for clothing or even limbs to be trapped between the lift car and the wall.

In order to remove this risk, the unprotected sides of two or three sided lift cars should be fitted with internal doors, controlled in such a way, that the lift will not operate unless the inner doors are closed fully. Until this can be achieved, a conspicuous warning notice should be provided both at the entrance to each lift car and inside each lift car, warning of the danger from the "moving wall" effect."

The floor of all lift cars should be level with the floor outside when stopped. If this is not the case, there is a risk that people entering or leaving the risk car might trip. If necessary, the lifts should be serviced by a lift engineer, to ensure that the lift cars are level with the floor outside when stopped.

In case of lift breakdown, a "stop" control button and an audible alarm with an alarm button inside the car, or an emergency communication device, should be provided inside each lift car.

Unless emergency lighting is provided, if a failure of the lifts should coincide with a failure of the mains electrical supply the inside of the lift cars would be in darkness, which may cause panic for those inside the lift car. For this reason, emergency lighting consisting of self-contained units, constantly trickle-charged by the mains electrical supply, should be provided within each lift lobby and each lift car. The emergency lighting should operate on the failure of the relevant, local lighting circuit and not only on the failure of the mains supply.

Effective advance arrangements should be put in place for releasing persons shut in lifts. In this respect, the local fire brigade should be consulted, as they may be able to assist.

4.2 Medical Facilities

It is always possible that small accidents to both staff and customers may occur, leading to slight injuries. For this reason, there should be at least one member of staff trained in First Aid on duty at all times.

Wherever possible, arrangements should also be made with a local doctor who is willing to come to the property in the event that someone is taken ill.

4.3 Corridors and Stairways

In order to reduce the chance of people being injured in trips and falls, staff should be encouraged to report (as part of the agreed maintenance plan) any worn or badly fitted carpets, or any other potential trip hazards anywhere within the property. This applies particularly in circulation areas, along corridors or on any stairs but also in bar areas, lounges, restaurants and any other areas of the building.

Where any worn or badly fitted carpets or any other trip hazards are found, they should be removed, repaired or replaced to eliminate or reduce the hazard.

There is also a risk that people may fall and injure themselves when floors are slippery for any reason, for example due to cleaning or spillages. Whenever floors are slippery, warning notices highlighting the hazard should be displayed in the area.

The risk of trips and falls can also be considerably reduced by ensuring that there is adequate lighting at all times. There may be areas within a building where the natural lighting is inadequate even during the hours of daylight and these areas should be clearly illuminated by the normal, primary lighting at all times.

Most other areas will probably be adequately lit by the natural light from outside during daylight hours but must be clearly illuminated by the primary lighting system during the hours of darkness.

Full length glass panels in circulation routes and in other areas of the building such as patio and balcony doors can be dangerous because it may not be obvious that they are there and there is a chance that people may walk into them. Wherever full length glass panels are in place throughout the building they should be made manifest or obvious by placing warning strips, identifying stickers or anti-collision motifs on them. In order to protect both adults and children, the warning strips, stickers or motifs should be provided at adult eye level (approximately 1.5 metres from the floor) and at child eye level (approximately 800 millimetres from the floor) .

The risk of injury from collisions with full length glass panels and doors can be further reduced by ensuring that the glazing is of adequate strength and stability. . All glass fittings and doors must be constructed of suitably robust materials and compliant with local standards.

A plan of maintenance must be in place to ensure all equipment and areas of public and staff use are maintained in a safe condition. All maintenance should be carried out by suitably trained personnel and documented. Regular checks should be carried out and documented by trained staff to ensure the plan is properly implemented.

4.4 Gas Safety

4.4.1 Gas Cookers

As gas cookers are not designed to be switched on for very long periods of time and are much lower powered than gas boilers and water heaters, they do not present the same risk. In order to ensure the safety of gas cookers, however, some basic precautions are necessary.

If caps are missing from any of the burners of the cooker the gas may not burn properly as the caps are not in place to dissipate the gas. If any burner caps are missing, they should be replaced and the cooker should not be used until they are replaced.

It may not be possible to turn off the gas supply to the cooker burners if any control knobs on the gas cooker are missing or broken. Any missing control knobs on the gas cooker should be replaced and the cooker should not be used until they are replaced.

Gas cookers should be level and stable. If the cooker is not stable, it should be adjusted so that it is level and does not move.

4.4.2 Central Gas Boilers

Where heating or hot water is provided by a central gas boiler, this usually presents little risk to customers. This is because such boilers are so big and complicated that competent engineers are needed to install them. The engineers generally ensure that the boilers are installed in accordance with the manufacturer's instructions and with local regulations, where such local regulations exist.

Even where local regulations are poor or non-existent, compliance with the manufacturer's instructions should still ensure a safe installation.

Central gas boilers are fitted with a flue, which is a type of chimney usually made of metal and designed to carry away the smoke and gases produced by the boiler to a safe place outside, from where these products of combustion can safely dissipate into the air. As the products of combustion are removed, this allows fresh air into the boiler helping to ensure that it works properly.

The discharge point of the flue, that is the end of the flue outside the building, should be sited in such a way that it is not possible for smoke and gases being discharged from the flue to re-enter the building.

To ensure this, the flue should discharge at least 1.5 metres away from any unsealed openings into the property such as windows, doors, ventilation ducts and any other unsealed openings (including holes around pipes and cables etc.).

In some circumstances, a distance of less than 1.5 metres may be acceptable. Where a flue discharges within 1.5 metres of an unsealed opening *into a customer accommodation building*, however, then the safety of the boiler should be certified by a competent gas engineer.

4.4.3 Individual Gas Water Heaters/Boilers

Individual gas water heaters and boilers, which provide heating and/or hot water to single or small groups of customer accommodation units can present a greater risk than central gas boilers if they are not properly installed and maintained. This is because they are generally located within, or in very close proximity to, the customer accommodation. In some countries, where gas regulations may not be particularly strong, the property owner or handyman may install them. Clearly, in this case they may not be as well installed as they would be if installed by a competent gas engineer.

There are two main types of gas water heaters and boilers. These are;

- Room-sealed (or balanced flue) appliances
- Open-flued appliances

Room-sealed (or balanced flue) appliances

These are generally safer because they are completely isolated from the room or space that they occupy. They take the air that they need to work properly from outside through one part of the balanced flue, rather than from within the room or space. The smoke and gases produced by combustion are then discharged externally via another part of the balanced flue.

Open-flued appliances

Open-flued appliances take the air that they need to work properly from within the room or space that they occupy. They then discharge the products of combustion externally via a flue.

An open-flued appliance can most easily be recognised by the draught diverter sited immediately above the appliance, from which the flue then extends out to open air. If something goes wrong with an open-flued appliance, there is a chance that the products of combustion, including Carbon Monoxide, could escape into the room or space in which the appliance is located.

Clearly, by definition, a room-sealed appliance will have a flue as otherwise it would not be room sealed. Open-flued gas water heaters and boilers, however, have occasionally been found without a flue fitted. This is not acceptable and a flue should be fitted.

Whether individual gas water heaters or boilers are room-sealed or open-flued, it is important that the flues serving them carry away the smoke and gases produced to a safe place outside, from where these products of combustion can safely dissipate into the air.

The discharge point of the flues, that is the end of the flues outside the building, should be sited in such a way that it is not possible for smoke and gases being discharged from the flues to re-enter the building.

To ensure this, the flues should discharge at least 600 millimetres away from any unsealed openings into the building such as windows, doors, ventilation ducts and any other unsealed openings (including holes around pipes and cables etc.).

In some circumstances, however, a distance of less than 600 millimetres may be acceptable. Where a flue discharges within 600 millimetres of an unsealed opening *into a customer accommodation building*, however, then the safety of the boiler should be certified by a competent gas engineer.

Individual gas water heaters/boilers may often be installed other than inside a customer accommodation building; either externally in the open air on an external wall or balcony, within an outbuilding that is attached to a customer accommodation building, such as a garage, shed, lean-to, small boiler room or compartment, or they may be located in an outbuilding that is not attached to a customer accommodation building.

If an open-flued appliance is located in an outbuilding that is attached to a customer accommodation building, it is important that there are no unsealed openings between the outbuilding and the customer accommodation building.

As with gas water heaters or boilers that are located within a customer accommodation building, it is important that the flues serving appliances in other locations discharge at least 600 millimetres away from any unsealed opening into a customer accommodation building. Otherwise, despite the fact that the appliance is not within the customer accommodation building, it is possible that the products of combustion, including Carbon Monoxide, could enter the building.

Gas water heaters and boilers should be regularly inspected and serviced by a competent gas engineer to ensure the continued safety of the installation. This should take place annually.

The provision of a Carbon Monoxide detector in customer accommodation with gas appliances is a recommended additional safeguard. Such detectors should not be used as a substitute for correct installation, inspection and servicing of the appliances however.

Any individual gas water heater/boiler may produce harmful fumes, including Carbon Monoxide, if not properly installed and maintained. This risk can be removed altogether by replacing the water heaters/boilers with electrical appliances.

As room sealed gas water heaters/boilers are completely isolated from the room or space that they occupy, these types of heaters are considered safer than the open-flued appliances.

4.4.4 Gas-General

It is important that Liquid Petroleum Gas (LPG) cylinders are safely stored away from sources of ignition. If LPG cylinders are involved in fire they can greatly increase the intensity of the fire and may explode. For this reason the cylinders should be stored outside, in a well ventilated but secure store and where they are protected from direct sunlight.

Ideally, LPG cylinders in use should also be kept outside of the building and the gas should be piped in from the externally located gas cylinders to the heaters.

In the event of a leak from a cylinder that is in use inside a building, it would be possible for a build-up of gas to occur at low level. In order to reduce the possibility of a build up of gas in these

circumstances, good ventilation should be provided at both high and low level in the kitchen area or other area where the cylinder is in use.

If the cylinder in use is kept within a cupboard or cabinet, the cupboard or cabinet should be provided with ventilation openings at low level. This is necessary to prevent a build-up of gas within the cupboard or cabinet in the event of a leak.

Rubber pipes or tubes are often used to connect LPG cylinders to the gas appliances which they are supplying. Sometimes these pipes or tubes are marked with a date, sometimes they are not. If the pipes or tubes are "out of date" they should be replaced.

Worn rubber pipes or tubes may become holed and allow gas to leak. Pipes or tubes that show signs of hardening, brittleness, or cracking, (whether dated or not and even if they are dated and within date), should be replaced by a competent person.

It should be ensured that the replacement pipe or tubes are of a suitable type and that if dated, they are within date. The pipe or tubes should be secured at each end by suitable clips or fastenings.

In order to ensure that gas appliances can be safely used by customers, clear operating instructions in English and other relevant languages should be provided for all appliances.

4.5 Balconies and Balustrades

Balconies should be of sound construction with a balustrade at least 1 metre high which is free from any features which would encourage a small child to climb. Where a balcony balustrade is less than 1 metre high, this presents a hazard to adults and the height of the balustrade should be increased. A height of 1 metre is acceptable for existing balustrades but in order to meet modern standards, where it is necessary to increase the height of an existing balustrade, the height should be increased to 1.1 metres.

New balcony balustrades should be constructed so that they are at least 1.1 metres in height.

Any gaps in balcony balustrades should not be large enough to allow a sphere of 100 millimetres to pass through them. Children are the most vulnerable in this area as it is possible for gaps to pose an entrapment risk if a child pushes their head through them. Larger gaps may allow a small child to pass right through the balustrade.

Where there are oversized gaps in balcony balustrades, the balustrades should be modified to ensure that there are no gaps that will allow a sphere of 100 millimetres to pass through them.

The design of some balcony balustrades may incorporate step-ups that reduce the effective height of the balustrades and onto which small children could climb. If a balustrade incorporates a step-up, the effective height of the balustrade is the height measured from the top of any step-up to the top of the balustrade.

Step-ups that reduce the effective height of a balcony balustrade below 800 millimetres, pose a risk to small children as they may climb up onto the step-up and could fall over the balustrade. Balconies constructed entirely of horizontal rails obviously provide a series of step-ups, creating a ladder effect that reduces the effective height to an unacceptable level, posing a risk to small children.

Where step-ups reduce the effective height of a balustrade to less than 800 millimetres, the balustrade should be modified to remove the risk to small children. This is usually done by increasing the overall height of the balustrade so that the distance from the top of the step-up to the top of the balustrade is greater than 800 millimetres.

An acceptable alternative to increasing the height of the balustrade is the provision of an inner rail, set in at least 150 millimetres from the top of the balustrade on the balcony side. The provision of a rail in

this position makes it difficult for small children to climb the balustrade and so nullifies the effect of the step-up.

Step-ups of 600 millimetres or higher are not easily climbable by young children and thus do not present the same risk as lower step-ups.

Where a balcony balustrade has oversized gaps and/or step-ups, that present a risk to children they can be temporarily modified to remove the risk pending a more permanent solution. This can be achieved by completely covering the inside face of the balustrades with close mesh netting, or similar material.

Balconies should be of a "sound construction". Key elements to be aware of are corrosion at the point where the balcony is fixed to the building and loose or damaged balustrades. Many newer or modified balcony balustrades incorporate clear glass or Perspex panels in their construction. These panels should be checked to ensure they are secure and they should be repaired or replaced if they are not.

The unprotected edges of flat roofs, patio areas and any drop greater than 600 millimetres in height should be protected by a balustrade constructed to a similar standard as that required for a balcony. This includes stairwells and stairs although the height required for the balustrade protecting the actual stairs is 900 millimetres.

Handles should be provided on both sides of balcony and patio doors to ensure that they can be opened easily from either side when unlocked.

4.6 Child Safety

4.6.1 Cots

Cots should be well maintained and in a good state of repair with no sharp edges on which a baby or child could injure themselves. They should be regularly cleaned to ensure that they remain hygienic.

Any cots that have loose or broken parts, or sharp edges, should be taken out of use immediately and should not be brought back into use until the defects have been rectified.

In order to ensure that a baby or small child cannot easily fall out of the cot, the top of the cot rails should extend to at least 500 millimetres above the top surface of the cot mattress. Any gaps in the cot rails should not be large enough to allow a sphere of 100 millimetres to pass through them. It is possible for gaps to pose an entrapment risk if a child pushes their head through them. Larger gaps may allow a small child to pass right through the rails.

Cot mattresses should fit snugly into the base of the cot with no gaps between the mattress and the sides and ends of the cot. In the interests of cleanliness and hygiene, the mattresses should have a waterproof, wipe clean surface.

Any mattresses that are split or torn should be taken out of use immediately.

If cots are fitted with wheels or castors, the wheels or castors should be lockable to ensure that movement of the baby or child in the cot cannot cause the cot to move.

4.6.2 Bunk Beds

Bunk beds must be in a good state of repair with no sharp edges. The top bunk of a bunk bed should not be used for a child under 6 years old.

Guard rails should be screwed, bolted or otherwise firmly secured and ideally provided on both sides to prevent risk of falls and entrapment between the bed and any adjacent wall. Guard rails should be

extended to a minimum of 100 millimetres above the mattress surface to prevent a child from rolling off.

There should be no gaps anywhere that are less than 60 millimetres or more than 75 millimetres in the frame so as to minimise the risk of entrapment.

The gap that allows access to the top bunk must be in the safety barrier on one of the long sides of the bed and needs to be a minimum width of 300 millimetres to allow safe access.

Although some ladders are detachable it is recommended that ladders should be firmly fixed in place as a permanent feature.

The mattresses should fit snugly in the base of each bunk bed, with no gaps between the mattress and the headboard or footboard.

4.6.3 High Chairs

Highchairs provided for use by babies and small children should be of the traditional freestanding types that stand on the floor. Highchairs of the type that clip onto the side of tables should not be used as these may become detached, allowing the chair and the baby or child to fall to the floor.

The highchairs should be provided with fixing points and harnesses so that babies and small children can be safely fastened into them.

Highchairs should be well maintained and in a good state of repair with no sharp edges on which a baby or child could injure themselves. They should be regularly cleaned and sanitised to ensure that they remain hygienic.

Any highchairs that have loose or broken parts, or sharp edges, should be taken out of use immediately and should not be brought back into use until the defects have been rectified.

If highchairs are fitted with wheels or castors, the wheels or castors should be lockable to ensure that movement of the baby or child in the highchair cannot cause the highchair to move.

4.6.4 Children's Clubrooms - General

In order to ensure easy access and egress from the children's clubroom, whenever possible the clubroom should be located on the ground floor. The clubroom should have a minimum of 35 metres of usable floor space. This amount of usable floor space will provide sufficient space for 20 children to play.

To reduce the risk of injury to small children from collisions within the clubroom there are a number of precautions that should be taken;

a. There should be no sharp or protruding corners or edges on furniture, fixings and fittings within the clubroom. If there are, this equipment should be replaced with alternative equipment with rounded edges and corners.
b. Any shelving and fittings, between the height of 1 metre and 1.5 metres above the floor, on the walls of the children's clubroom should be removed.

To reduce the risk of injury from slips, trips and falls, a non-slip floor surface should be provided in the children's clubroom. Staff should be encouraged to report (as part of the agreed maintenance plan) any worn or badly fitted carpets, or any other potential trip hazards within the clubroom.

A plan of maintenance must be in place to ensure all equipment and areas of public and staff use are maintained in a safe condition. All maintenance should be carried out by suitably trained personnel and documented. Regular checks should be carried out and documented by trained staff to ensure the plan is implemented properly.

Where any worn or badly fitted carpets or any other trip hazards are found, they should be removed, repaired or replaced to eliminate or reduce the hazard.

The risk of trips and falls within the clubroom can also be considerably reduced by ensuring that there is adequate natural lighting at all times within the clubroom. Where this is not the case, the natural lighting in the clubroom should be improved by the provision of additional windows, or other sources of natural light.

In order to ensure that any slight cuts or bruises that do occur can be quickly dealt with, a well-equipped First Aid kit should be provided in the children's clubroom.

For the comfort of children using the children's clubroom, the temperature within the clubroom should be maintained at a comfortable level, neither too hot or too cold, at all times.

As in any other area, full length glass panels in children's clubrooms can be dangerous because it may not be obvious that they are there and there is a chance that people may walk into them or children, in particular may run into them. If the glass was to shatter, this could lead to serious injury.

Wherever full length glass panels, including patio type doors, are in place in the clubroom they should be made manifest or obvious by placing warning strips, identifying stickers or anti-collision motifs on them. In order to protect both adults and children, the warning strips, stickers or motifs should be provided at adult eye level (approximately 1.5 metres from the floor) and at child eye level (approximately 800 millimetres from the floor) .

The risk of injury from collisions with full length glass panels and doors can be further reduced by ensuring that the glazing in the clubroom is of adequate strength and stability. Due to the absence of an internationally agreed marking system for glass it is not generally possible to check the type of glass or its thickness without specialist equipment. This can only be established with certainty by a glazing specialist. If any glazing appears loose in its frame, however, this indicates a problem and the glazing should receive attention from a specialist.

All operable windows in the children's clubroom that are accessible to children should be kept locked shut, or should be modified so that any opening is limited to 100 millimetres.

Any gaps in railings in, or near the clubroom, should not be large enough to allow a sphere of 100 millimetres to pass through them. Children are the most vulnerable in this area as it is possible for gaps to pose an entrapment risk if a child pushes their head through them. Larger gaps may allow a small child to pass right through the railings.

Where there are oversized gaps in railings, the railings should be modified to ensure that there are no gaps that will allow a sphere of 100 millimetres to pass through them.

In order to ensure a pleasant atmosphere for children, the walls in the clubroom should be free of damp, clean and freshly painted. If this is not the case, the walls should be treated to remove any damp patches, painted and cleaned as necessary.

A method for the secure storage of all materials and equipment used in the children's clubroom should be provided.

A telephone, or other method of communication, should be provided in the children's clubroom, so that assistance can be summoned in the event of an emergency, without staff needing to leave the clubroom to do so.

4.6.5 Children's Clubrooms - Toilets

In the interests of the comfort and safety of children using the clubroom, designated children's toilets should be provided either in the children's clubroom, or in a location very close to and visible from the clubroom.

The designated children's toilets should be regularly cleaned and maintained to ensure that they remain in satisfactory condition.

Soap and hand drying facilities should be provided in the designated children's toilets but if towels are to be provided, the towels should not be of the roller towel type as these present a strangulation hazard if small children become entangled in them. Any roller towels should be removed.

In case of an emergency, the doors from the children's clubroom should be unlocked and available at all times when the clubroom is in use. Any locks fitted for the security of the children should be able to be overridden from the inside without the use of a key to allow immediate opening of the doors.

The escape routes leading from the children's clubroom out to open air should be cleared of all obstructions and storage to ensure that adults and children leaving the clubroom in an emergency are not hindered in making their escape. The escape routes should be maintained clear of obstruction at all times.

A general purpose fire extinguisher, preferably a 9 litre water extinguisher, should be provided and sited near to the exit from the children's clubroom. The extinguisher should be mounted on the wall, with its handle 1.5 metres above the ground so that it is out of the reach of children.

In order to provide information to staff and parents in the children's clubroom of the procedure to be followed in the event of a fire, a notice outlining the "Action in case of fire" in English and other relevant languages, should be provided and sited in a suitable location close to the exit from the clubroom.

Ideally, a smoke detector linked to the fire alarm system should be provided in the children's clubroom. If linked detection is not provided, a domestic type smoke alarm should be provided in the clubroom. The smoke alarm in the children's clubroom should be tested monthly and repaired or replaced as necessary to ensure that it remains in full working order.

4.6.6 Children's Clubrooms - Electrical

A plan of electrical maintenance must be in place to ensure all equipment and areas of public and staff use are maintained in a safe condition. All electrical maintenance should be carried out by suitably trained personnel and documented. Regular checks should be carried out and documented by trained staff to ensure the plan is implemented properly.

As electrical systems are major causes of fires it is important that the integrity of the electrical system in the children's clubroom is maintained, as well as elsewhere in the building. All staff should be encouraged to report (as part of the agreed maintenance plan) any electrical defects that they find. If there are any concerns as to the condition of any electrical appliances, games machines, sockets, plugs and switches then they should be taken out of use immediately and should not be brought back into use until any defects have been rectified by a competent and qualified person.

The electrical installation within the clubroom should be checked annually, at the same time as the installation in the remainder of the building, by a competent and qualified person, who should provide certification to show that the installation is satisfactory.

In order to ensure that children cannot put their fingers into electrical sockets in the children's clubroom, all electrical sockets that are in reach of small children should be blanked off with safety plugs or covers to prevent access by children.

4.6.7 External Play Areas

It is essential that the children's play area should be located in a safe position away from traffic, cliffs, water hazards, electrical installations and similar hazards. If an existing play area is located close to any such hazards, it should be relocated to a safer area.

The children's play area should be provided with a suitable un-climbable wall or fence, with lockable gates, to prevent children from wandering away from the area and also to prevent animals from entering the area.

The fence, gates and locks should be maintained in good condition and any defects should be rectified immediately.

In order to reduce the chance of injury to children if they fall from the play equipment, a soft surface should be provided beneath all equipment in the play area. The surface could be grass, rubber matting, sand, which must be regularly raked, or similar materials.

Children within the play area should be supervised to all times. As a reminder to parents, a warning sign stating that 'Children Must be Supervised At All Times' should be provided and prominently displayed in the children's play area.

In order to prevent unauthorised use and possible damage to the equipment, the children's play area should be locked at night.

The children's play area should be cleaned regularly, preferably daily and all litter and rubbish should be removed.

All play equipment should be regularly inspected and maintained to ensure that it remains in good condition. Any defective equipment should be taken out of use immediately and not brought back into use until all defects have been repaired.

4.6.8 Windows

In order to provide protection from falling for children, opening windows should have sills that are at least 800 millimetres high when measured from the floor inside the room. Where this is not the case, a guard rail should be provided inside the window at a height of 800 millimetres. Alternatively, a restrictor can be provided to stop the window from opening more than 100 millimetres.

4.7 Pest Control

An integrated pest management (IPM) plan should be in operation within the property. In most cases this will be in the form of a contract with an external pest control firm. The IPM should include details of potential pests and systems of monitoring and controlling infestations. The plan should be preventative and reactive allowing for regular treatment and monitoring regardless of sightings and include a 'call out' facility to be used in the event of sightings. Most contracts consist of at least monthly visits to check on baiting points and carrying out treatments where necessary.

The IPM should cover all areas of the property and include measures for rats, mice, cockroaches and bed bugs, in the case of sleeping accommodation. The IPM should include

- records of all treatments carried out
- records of sightings

Any sightings or complaints of pests by either staff or customers should be logged and acted upon.

A guidance document on Bed Bugs is available as an addendum to this document in Appendix 2.

5 Swimming Pool Safety

5.1 Pool Safety - General

Submerged features such as walls, rocks and ledges beneath the water in a swimming pool pose a serious risk to people using the pool, particularly divers and people jumping into the pool. There is a danger of serious injury if a diver or someone jumping into the pool collides with any submerged feature. Any submerged features should be removed from the pool, or alternatively built up well above the surface of the water and painted in a conspicuous colour, both above and below the waterline, so that they are clearly visible and it is obvious that they are present.

If submerged features are not to be removed, conspicuous "No Diving/No Jumping" signs should also be provided on or near to them.

Raised features such as walls, rocks, bridges, urns and other raised decorative features around the pool present a diving or jumping allurement to people using the swimming pool. There is a danger of injury if divers and people jumping into the pool dive or jump from these raised features, as such people may collide with the pool side, the pool bottom, or any submerged features and suffer serious injury. Any raised features should be removed from around the pool.

If raised features are not to be removed, conspicuous "No Diving/No Jumping" signs should be provided on or near to them.

Diving boards or platforms, although designed for diving, can also be dangerous to divers and jumpers if there is insufficient water beneath and in front of them.

A diving board or platform that is 1 metre high, measured from the surface of the water in the pool, requires a minimum 'forward clearance' distance of water of 9 metres to allow for safe diving. In addition, the depth of water for the first 5 metres in front of the diving board or platform should be at least 3.5 metres.

The forward clearance distance is measured from the front of the diving board or platform to the opposite wall of the pool, or to the nearest obstacle in the pool, whichever is closer.

If any of these conditions are not met, there is a danger that divers or jumpers might collide with the pool bottom, the opposite wall of the pool, or any other feature in the pool that is within 9 metres and could suffer serious injury.

If there is not a minimum of 9 metres distance in front of the diving board or platform, or there is not a minimum depth of water of 3.5 metres for the first 5 metres, the diving board or platform should be removed.

5.2 Pool Safety – Depths

Communicating the depth of water in a swimming pool is important as it could pose a significant risk to non–swimmers entering a swimming pool if the depth of water at the point where they are entering the pool is too deep. It could be equally as dangerous to a diver or to a person jumping into a pool if the water is too shallow, as there is a danger that the diver or jumper could collide with the pool bottom and suffer serious injury.

In order to ensure that anyone entering the swimming pool is aware of the depth of water at the point where they are entering the pool, conspicuous depth markings should be sited inside and around the pool. The markings should be sited at approximately 3 metre intervals and should be no less than 100 millimetres^2 in size.

If any depth markings are too small or not easy to read, they should be replaced or repainted. If the depth markings are too infrequent, that is if they are spaced too far apart, additional markings should be provided at 3 metre intervals.

Even when depth markings are in place, they can present a risk to people entering the pool if they are inaccurate. Checks should be made to ensure that all markings show the actual depth of water adjacent to the marking point. Inaccurate depth markings should be replaced or the water level adjusted to the correct depth as indicated by the markings.

The freeboard of a swimming pool, that is the distance from the surface of the water in the pool to the top of the pool surround or side, should not be more than 300 millimetres. If the freeboard is any greater than 300 millimetres, this can make it difficult for some people to get out of the pool.

If the freeboard of a pool is greater than 300 millimetres, the depth of water in the pool should be adjusted so that the distance from the top of the pool surround, to the surface of the water, does not exceed 300 millimetres. If necessary the depth markings around the pool should be replaced with markings that indicate the new depth of water.

Sudden changes of depth within a swimming pool can be dangerous if they occur where the pool water is less than 1.5 metres deep. This is because non-swimmers, who are comfortable in water that is 1.5 metres deep, or less, can suddenly find themselves in water that is too deep.

Sudden changes of depth in water that is more than 1.5 metres deep are not considered a problem because, once most people are in water that is deeper than this, it would already be too deep for them to stand up in and they would be swimming or floating. Thus a sudden change of depth in water that is more than 1.5 metres deep would make little difference to them.

If there are any sudden changes of depth in a swimming pool at a depth of 1.5 metres, the pools should be modified to remove the sudden changes of depth. If the pool is not to be modified, the sudden changes of depth should be clearly indicated by notices, painted lines, coloured tiles, buoyed lines etc. The changes of depth should be further indicated by the use of additional depth markings.

The minimum depth of water into which it is safe to dive from the side of the pool is 1.5 metres. Diving into water that is any less than 1.5 metres deep can be very dangerous to the diver as they may collide with the bottom of the pool and suffer serious injury.

In order to discourage people for diving into the pool where there is insufficient depth, conspicuous “No Diving” signs should be provided and prominently displayed around the swimming pool, wherever the depth of water is 1.5 metres or less.

A pool information notice, sometimes referred to as a “multi-board”, should be provided to ensure that people are aware of the rules relating to the use of the swimming pool. This notice should be prominently displayed near the pool, preferably at the access point where people enter the pool area. For large pool areas, it may be necessary to provide several notices.

The notice could include any relevant safety information, but should at least display the following information:

(a) The pool's opening hours.
(b) Night swimming is prohibited.
(c) Children should be supervised.
(d) What to do in case of emergency.
(e) Shower before entering the pool.
(f) Whether the pool has a lifeguard on duty

5.3 Pool Safety – Supervision and Rescue

Ideally, all swimming pools should have a trained, dedicated lifeguard on duty when the pool is open. This is a requirement in many countries. As well as ensuring that the pool rules are obeyed, the lifeguard will be on hand to deal with any emergency arising at the pool.

It is essential that people are made aware when a lifeguard is not on duty. When a lifeguard is not available, signs stating that there is no lifeguard on duty should be provided and sited in prominent locations around the pool area. This information should also be provided on the pool information notice.

In order to deal with any injuries that may occur in and around the swimming pool area, a member of staff, who is trained in First Aid, should be on duty and available at all times when the pool is open.

In some countries, the provision of resuscitation equipment for use in case of an emergency at the swimming pool is required. Whenever resuscitation equipment is provided, whether as a legal requirement or not, the equipment should only ever be used by people who are trained in its use.

If resuscitation equipment is provided for use, a member of staff who is trained in the use of the equipment should be on duty and available at all times during pool opening hours.

5.4 Pool Safety – Management and Pool Surround

Due to the wet conditions that are prevalent around a swimming pool when in use, it is possible that pool users could slip and fall, injuring themselves. In order to reduce the likelihood of this occurrence, the pool surround should be provided with a non-slip surface.

The non-slip surface could be inherent in the materials used to surface the pool surround. For example, a rough surface or a non-slip treatment applied to the surface, or some type of non-slip matting. If non-slip matting is used, care should be taken to ensure that the edges of the mat do not present a trip hazard to pool users.

If there are any cracked or broken tiles in the swimming pool, it is likely that people using the pool could cut their feet. Cracked or broken tiles or paving stones on the pool surround and on the approaches to the pool could lead to cut feet, or present a trip hazard which might cause people to fall and injure themselves.

In order to avoid this, any cracked or broken tiles, paving stones etc. in or around the swimming pool should be repaired or replaced.

Any other trip hazards around the swimming pool should be removed, or if they cannot be removed they should be highlighted to ensure that they are apparent and so reduce the risk.

It is important that the water in the swimming pool should be clear so that pool users can judge the depth before entering the pool. If the water is clear, it will also ensure that anyone in trouble can be seen immediately.

The pool should be properly cleaned at least once a day and any necessary additional measures should be taken to improve the clarity of the water. Regular checks should be carried out to ensure that the cleanliness is maintained. A record, in writing, should be kept of all cleaning activities carried out.

The quality of the pool water, particularly pH and chlorine levels, should be checked and adjusted as necessary at least twice a day. Records of the checks and of chemical dosing should also be recorded in writing.

If a swimming pool user should get into trouble in the pool, it is possible that there may not be anyone close by that is a strong enough swimmer to assist. For this reason, it is essential that life saving equipment should be provided that can be used without the person rendering assistance entering the pool.

Life saving equipment in the form of a life ring, reach pole, or alternative form of buoyancy aid should be provided and prominently sited near the pool. For large pool areas, it may be necessary to provide this equipment at more than one point around the pool.

There should be adequate means of access and egress to the swimming pool; that is adequate ways of getting in and out of the pool. These may be in the form of steps or ladders.

If steps are provided for access and egress to the pool, the nosing or leading (front) edge of the steps should be highlighted in a contrasting colour to the pool walls and bottom. This will ensure that the steps are clearly visible both from outside and inside the pool.

As well as making the steps more obvious to people entering and leaving the pool, this should also make the presence of the steps obvious to divers or people jumping into the pool.

If access and egress to the pool is by way of ladders, the ladders should be secure and free from defects.

All other pool fixtures and fittings should also be in place, secure and in good condition, including any lights in the pool, grilles, handrails and covers. Any missing, loose, or defective fixtures and fittings should receive immediate attention to reduce potential hazards

There are obvious risks with the use of swimming pools during the hours of darkness. A restriction should be placed on the hours of bathing and no bathing or swimming should be allowed after dark. The pool should be “closed” and ideally secured at night. A notice should be displayed advising people of the hours during which the pool is open.

To avoid the risk of anyone accidentally falling into the pool, when the pool is “closed”, the pool should be illuminated during the hours of darkness.

The pool plant room may contain machinery that can cause injury and will almost certainly contain chemicals that can be dangerous. The plant room should be secured and locked at all times when not in use by staff.

If drinks are served around the pool in glasses, there is a danger that they may be dropped and broken and people using the pool could cut their feet on broken glass. For this reason, drinks around the pool should be served only in unbreakable containers.

It is important that the swimming pool water circulation and filtration system is designed to ensure that there is no entrapment hazard for swimmers. Water outlet covers must be in place, firmly secured and undamaged. The flow rate through the outlets should not be excessive and a relief valve should be provided that will release the suction from the outlets if a swimmer should become trapped. If there is any doubt about the safety of the system, specialist advice should be sought.

5.5 Pool Safety – Spa/Jacuzzi Pools

Spa facilities are often provided near to swimming pools. In order to ensure that users are aware of the temperature of the water in the spa, it is important that a notice detailing the water temperature should be prominently displayed near to the spa.

Young children should not be allowed to use the spa and certainly not without supervision. A minimum age policy should be in place for use of the spa and a notice detailing the age restrictions should be provided and prominently displayed near the spa.

In order that staff and customers are fully aware of the action to be taken in the event of an incident at the spa, a notice detailing the action to be taken in the event of an emergency should also be provided and prominently displayed near the spa.

In the interest of their health, people who suffer from high blood pressure or heart conditions and pregnant women should not use the spa. A notice detailing these restrictions should also be provided and prominently displayed near the spa.

It should be possible to quickly switch off the spa in the event of an emergency. An emergency shut off for the spa, together with a notice detailing its operation, should be provided and prominently sited near the spa.

5.6 Pool Safety – Children's Pools

In order to ensure that small children cannot leave the children's pool and enter the main adult pool before parents and supervising adults can intervene to stop them, the distance between the children's pool and any adult pool should be at least 3 metres.

Where the distance between the children's pool and any adult pool is less than 3 metres, a suitable impenetrable barrier should be provided to separate the children's pool from the adult pool. The barrier should extend to a height of at least 0.80 metres above the surface of the water and at least 1 metre to either side of the children's pool. The barrier should preferably be of solid construction but if rails are to be used, these should be vertical and not horizontal. There should be no gaps exceeding 100 millimetres between the rails and step-ups that reduce the effective height of the barrier should be avoided.

The location of the children's pool area should make it easy for parents or supervising adults to supervise the children's pool area. If necessary, access to the children's pool area should be improved to ensure that parents or supervising adults have a clear view of the pool and can easily supervise children using the pool.

In order to ensure the safety of children using the children's pool, the depth of the water in the children's pool should be 600 millimetres or less. If the water in the children's pool is deeper than this, the depth should be reduced to less than 600 millimetres.

The children's pool should be designed so that it can be easily used by small children. The height of the pool walls should be kept to a minimum and steps that enable children to get in and out of the pool without assistance should be provided.

5.7 Pool Safety – Waterslides/Flumes

Waterslides/flumes at swimming pools can present a risk as people using them could collide with swimmers in the swimming pool. Waterslides/flumes should be supervised by a responsible member of staff at all times when they are open.

A minimum age policy should be in place for use of the waterslides/flumes and a notice detailing the age restrictions should be provided and prominently displayed at the access point to them.

Riders using the waterslides/flumes must do so only in the correct riding position. A notice detailing the correct riding position should be provided and prominently displayed at the top of the waterslides/flumes.

Riders using the waterslides/flumes must be kept the correct distance apart, in order to avoid collisions on the waterslides/flumes or in the pool below them. A method of keeping riders apart when using the waterslides/flumes should be provided at the top of the waterslides/flumes. This should either be in the form of a "traffic light" system, a member of staff stationed at the top of the waterslides/flumes, or a notice advising riders not to commence their ride until the previous rider has cleared the landing area

A notice detailing the depth of water in the landing area should be provided and prominently displayed at the top of the waterslides/flumes.

In order to avoid collisions in the landing area, notices should be provided reminding riders to move out of the landing area immediately. The notices should be displayed at the top of the waterslides/flumes and in the landing area.

The landing areas of the waterslides/flumes should be segregated from the general swimming area. Where there is more than one waterslide/flume, the landing areas of each should be separated from each other.

5.8 Water Quality

Water quality of swimming pools is most commonly maintained through filtration and chemical treatment.

5.8.1 Filtration

Water is filtered through a medium (often sand) contained in a large tank to clear it of particulate matter. Maintenance of filters is relatively easy by ensuring they are backwashed regularly. In backwashing the water is quite simply passed through the filter in the opposite direction to normal flow cleaning the filtration medium. The waste water from this process is then disposed of. Note; if backwashed too frequently the efficacy of the filter is reduced, in most cases one backwash per week is sufficient.
A chemical known as a flocculant can be added to the water to assist the filtration process.

5.8.2 Chemical Treatment

The chemical treatment of swimming pool water is necessary to prevent the spread of disease organisms from person to person and prevent unwanted growth of bacteria and algae in the pool. Most chemical treatments are used to both disinfect and maintain pH balance of the water.

5.8.3 pH Balance

pH is the most important element in swimming pool water chemistry. It affects every other chemical balance in the pool water. pH is a scale for measuring the pools acidity or alkalinity level. Although the pH level is the most important element contributing to water balance, there are other factors that also influence water balance (these will be covered later in the guidance).

Chemicals normally used to treat swimming pool water:

- Sanitizers / disinfectants – to destroy harmful and objectionable organisms
- Soda Ash (sodium carbonate) / pH Plus – used to increase the pH level
- Sodium bisulphate / pH Minus – used to decrease the pH level
- Chlorine Stabiliser – to prevent unnecessary loss of chlorine

- Algaecide – to kill and prevent the growth of algae
- Filter Aids/Flocculants – to help remove foreign debris / material

The pH level indicates the relative acidity or alkalinity of your pool water. pH is measured on a scale from 0 (strong acid) to 14 (strong alkaline) and pH neutral is 7.

In pools a slightly alkaline level between 7.2 and 7.6 is ideal because this range is the most comfortable to the human eye, provides optimum use of free chlorine and provides water that is not corrosive or scale forming.

If pH falls too low (below 7):

- Water becomes acidic
- Eye & skin irritation occurs
- Corrosion - Heater element(s) may corrode, the pump impellor & other metal fittings on the pool will corrode
- Dissolved metals may leave stains on the walls
- Rapid loss of alkalinity
- Wrinkling of liner

If pH is too high (above 8):

- Chlorine activity is slowed and inefficient
- Scale formation and discolouration of pool walls
- Water becomes cloudy
- Filter is overworked and may become choked
- Eye and skin irritation may occur

5.8.4 Chlorine

The most commonly used disinfectant is chlorine. In its element form chlorine is a heavy greenish yellow gas that is so toxic it has been used as a weapon in chemical warfare. Because of the extremely high potential for injury or death from improper use of chlorine gas, a number of chlorine compounds have been formulated to provide chlorine in forms that can be handled and used safely by swimming pool operators. Chlorine is “used” and measured in two ways:

Free Chlorine Residual

This is the amount of chlorine in the pool that has not reacted with foreign substances other than water. It is the chlorine that is still available to disinfect pool water and oxidise organic substances.

Free chlorine residual should be maintained between 0.5ppm and 3ppm. (1ppm is optimal)

Combined Chlorine

Is basically “used” chlorine, that has reacted with foreign substances other than water and is no longer available in its free state (i.e. to disinfect the water). Chlorine combined with ammonia produces chloramines that cause eye irritation and an objectionable chlorine odour. For this reason combined chlorine residual should be kept to a minimum, preferably below 0.2ppm. A common misconception when chlorine can be smelt around a pool is that there is too much chlorine in the pool; it is in fact that there is too much “used” chlorine in the pool and more chlorine needs to be added to increase the free chlorine level.

Chloramines can be totally eliminated by using a UV Treatment. The only way to remove chloramines without a UV treatment is to shock treat the pool.

Total Chlorine

This is the concentration of free chlorine and combined chlorine. To determine the combined chlorine level test for free chlorine and total chlorine.

Combined Chlorine = Total Chlorine – Free Chlorine

Shock Treatment / Super chlorination

Regular use of the pool will increase the organic matter in the pool water that in turn will lower the efficiency of the sanitizer being used. A shock treatment will burn these organic materials out of the water and therefore allow the sanitizer to do its job properly. It may also become necessary to shock treat a pool if the water turns green due to an algae bloom.

When you shock treat a pool you are looking to increase the level of sanitising / oxidising chemical by a minimum of 3 times the normal amount.

Salt-water Chlorination

This has been used for many years in Europe, Australia and South Africa as it removes the need to add chlorine to a pool. Salt-water chlorination works by having an electrolytic cell break down the salt (Sodium Chloride) dissolved in the water in order to produce chlorine that acts as the sanitizer. Although you will still need to test the chlorine and pH levels the chlorine level will be monitored by the chlorinator and constantly increased or decreased as necessary. The solution produced by the chlorinator does not lose its disinfection force as it can be generated as required and directly dosed into the swimming pool water. Some chlorinators are also available with pH regulators included, removing the need to manually adjust the pH level.

Advantages:

- Eliminates irritated and sore eyes and skin
- Doesn’t bleach hair or bathing suits

5.8.5 Algae Control

Algae are microscopic single celled plant life that multiply very quickly. Algae will bloom and grow in swimming pools if nutrients are present and the free chlorine level is too low. Below are descriptions of the three most common algae problems in swimming pools:

- Green Algae – the most common algae in pools, floats in the water and coats pool surfaces. Left unchecked green algae will very quickly turn the pool water pea green
- Mustard Algae – settles on the pool walls and causes a slimy yellow film
- Black algae – appears in "buds" or clumps attached to steps and other pool surfaces

Chemical Solutions

- Green Algae - is very susceptible to chemical treatment. Shock treat the pool with chlorine and keep the filter running, brush the pool walls and floor. Periodically check the chlorine level and maintain above 3ppm until the algae clears. Once cleared a suitable algaecide can be used to prevent future outbreaks.
- Mustard Algae – is much more resistant to chemical treatment and clings more tightly to pool walls than green algae. Shock treat and thoroughly brush and vacuum the pool. Once cleared a suitable algaecide can be used to prevent future outbreaks.
- Black Algae – is very difficult to remove. It can be controlled to some extent by frequent shock treatment and thorough brushing and vacuuming. Black algae can usually be controlled with the use of strong algaecides and maintenance of relatively high free chlorine levels, but complete removal may require draining and cleaning the pool.

Ultra Violet (UV) Treatment

UV destroys the water-borne organisms including green, single celled algae and bacteria that make the pool water appear murky and unattractive. It will ensure clear pool water even in the absence of chlorine.

Short wave ultraviolet light has a photo oxidisation effect that destroys chloramines and other toxic by-products of chlorine, without adding additional chemical products. Fitting a UV treatment to your pool will also kill all algae instantly when it is passed though the UV treatment plant, but will not prevent algae and slime growth on the sides and surfaces of the pool.

It must be noted that while UV treatment is an effective one time disinfectant on water it does not have any residual effect. It is recommended that UV treatment is used alongside chlorination.

5.8.6 Cryptosporidium

Cryptosporidium (sometimes referred to Cryptosporidiosis) is a parasitic infection whose symptoms generally include stomach cramps and abdominal pain, diarrhoea and loss of appetite. As with many diarrhoeal infections this can quickly lead to dehydration in many patients.

Should a bather swallow water contaminated with the Cryptosporidium, infection may not occur immediately since the incubation period can last up to an average of 7 days before symptoms commence. In holidaymakers this may mean that some would not fall ill until after their return home.

The infection poses a specific risk as the organism can have a very low infectious dose rate. It is highly chlorine resistant and therefore relies upon effective filtration to remove the infectious organisms (known as oocysts). This can sometimes be difficult to achieve due to the very small size of the oocysts.

The illness can be passed on indirectly person to person as well as through the ingestion of contaminated water. This may arise through poor personal hygiene after visiting the toilet, after changing children's nappies or hand to mouth contact from contaminated surfaces.

Testing of water samples for the presence/absence of cryptosporidium is difficult. Large volumes of water must be filtered and examined and there are very few reputable and accredited laboratories that can reliably and routinely carry out the tests.

What precautions will reduce the risk of infection?

Education of bathers and swimmers

- People should be encouraged to shower prior to use of the pool to assist in the removal of germs and chemicals (sun lotions, perfumes and cosmetics) from their skin. Suitable and sufficient shower facilities should therefore be provided by the poolside and appropriate signage will help to encourage their use
- Parents should be discouraged from allowing children in nappies into the pool. Special swimming pants may be used
- Both adults and children who are suffering from, or have recently experienced an incident of diarrhoea, should be discouraged from using the pool. Again, signage will assist in the education of customers
- Provision of adequate toilet and nappy changing facilities will encourage use and will help to promote good personal hygiene. All facilities should be well maintained and kept clean at all times. Parents should be discouraged from changing nappies at the poolside

Pool Design and Maintenance

- Along with the structural safety of the pool it is essential that the pool filtration system and water treatment plant is adequate for its purpose and the capacity of the pool. All filtration systems will require regular maintenance programmes

- Pool designs vary and it is therefore beyond the scope of this document to provide detailed advice regarding this issue. Expert advice should be sought during the installation or refurbishment of the pool from the pool manufacturer

- Designated staff should be trained in the correct use and maintenance of the pool systems and a nominated person allocated responsibility for implementing the guidance contained within this document

- All procedures should be documented with log books of regular treatments and actions maintained. All records should be routinely checked and inspected by a member of the hotel management. We would emphasise the need to maintain written records of actions and daily treatments/checks as there are an increasing number of legal actions following cases of Cryptosporidium associated with hotels. It is very difficult to make a defence argument if the hotelier does not have written records of an active control plan

Faecal and / or vomit accidents

- An action plan to deal with faecal accidents in the pool should be prepared in writing. This should also include procedures for investigating suspected outbreaks of illness with up to date local health authority contacts and telephone numbers

- Staff should be familiar with this policy and should have access to a copy in the event of an incident. One person should be allocated the responsibility of ensuring that this protocol is followed

Recommended procedures

It is important to ensure that any such accident is identified and action taken quickly to prevent spread of infection. Faecal accidents and vomit can spread the infection. The first precaution is to ensure that any accident is quickly identified and the pool cleared immediately. Below are the housekeeping practices that need to be in place to minimise the risk of infection being spread as result of faecal/vomit accidents in the pool.

The accommodation management must appoint a person to take responsibility for implementing the procedures shown below, specifically to encourage all staff to maintain vigilance of the pool while in use.

In the event of a release of a solid stool, the following action must be taken:

- It must be retrieved quickly
- Ensure the scoop used is disinfected
- Ensure that the pool is operating correctly in other respects (pH, chlorine levels) and if these are acceptable no further action is necessary

In the event of a release of vomit or diarrhoea the following actions are to be taken:

- Clear pool of bathers immediately
- Ensure disinfectant levels are maintained at the top of the recommended ranges
- Ensure the pool is vacuumed and swept to remove any contamination as soon as possible (vacuum to a safe disposal point – not to a recirculation point of the pool). Disinfect vacuum after use
- Using a coagulant, the water is to be filtered for six turnover cycles
- The filter is to be backwashed throughout the operation
- Subject to clarity of pool and water samples taken indicating satisfactory chlorine and pH levels, the pool can then be reopened
- Records must be maintained of any such incidents and subsequent action taken

6 Food Safety/Hygiene

6.1 Introduction

Managing the safety of food within accommodation properties is critical to the well being of customers. Food-borne disease can quickly spread from affecting one individual to including a whole group of people who are travelling together.

In addition to illness, poor food safety can lead to contamination of food, wastage of food, pest infestation, and ultimately legal action. It is therefore essential that food safety be given due consideration.

6.2 Management

The ultimate responsibility for managing food safety lies with the management of the accommodation or restaurant. The Internationally accepted HACCP (Hazard Analysis and Critical Control Point) system is the most common and widely recognised method of ensuring the safe production of food and is applicable to all sizes and types of food preparation.

The principle of the HACCP system is to pinpoint where the main dangers or hazards regarding food safety may occur *(e.g. food stored at the wrong temperature allowing bacteria to grow)*, what is the chance or risk of it happening *(fairly high)* and finally how do we lower the risk of it happening *(by measuring the temperature of food and food storage areas regularly).*

Ideally one person in each hotel should be given the task of implementing and monitoring the HACCP system. The person carrying out the HACCP must be trained to identify all the physical, chemical and bacterial hazards associated with each step, and must also be aware of how to control them. (You may wish to employ an external hygiene expert to assist in drawing up a HACCP system and carry out audits on your system to ensure it is working properly).

They would be responsible for monitoring paperwork systems, carrying out regular hygiene audits, liaising with relevant staff (Head Chef, Department Heads, General Manager, etc.) regarding hygiene issues and improvements to the Food Safety System.

The person should also be responsible for ensuring work on food hygiene issues highlighted by staff, or through audits, are carried out and that all relevant staff are trained to the appropriate standard.

A documented staff structure should be drawn up outlining a job description for all catering, food and beverage staff defining levels of responsibilities in relation to the HACCP.

A HACCP will help produce safe food and comply with local legislation.

Other risk based methods of Food Safety Control can be used so long as major hazards are identified and suitable control measures put in place.

6.2.1 Water quality

There be a system of ensuring water in the premises is safe for human consumption whether this is through verification of the municipal supply or on-site water treatment.

The quality of water and ice should be monitored and recorded.

Ice used should only be produced from drinking water (including ice purchased from a supplier).

A constant supply of hot and cold water should be provided in all food preparation areas.

Water quality records must be maintained & available for inspection.

6.2.2 Food Delivery

A system should be in place to ensure that all delivered food products comply with the required standards for freshness, temperature, colour, and odour and that it is packaged and labelled correctly. In addition food and packaging must be delivered free from contamination and infestation. Blown or dented canned products must not be accepted. A system should be in place to deal with delivery problems.

Delivery systems should ensure that the temperature of chilled and frozen foods are checked at the point of delivery and where they are not within the acceptable limits (less than 8˚C for chilled food and below -18˚C for frozen foods) they are returned to the supplier. Once received, chilled and frozen foods should be appropriately stored within 15 minutes of delivery.

A record should be kept of all foodstuffs showing the date and time of delivery, the temperature and condition of the product/packaging upon receipt, and the name of the supplier.

6.2.3 Storage

Control should be maintained of stored foods. Stored stock should be kept to a minimum and a FIFO (first in, first out) stock rotation system adopted and maintained. The shelf life of all stored products must be known.

Once packaging is opened or decanted from the original packaging a system should be in place to identify and make known by labelling the shelf life of the product.

Any spoiled, rejected or out-of-date products should be stored separately from foods that are suitable for consumption.

Storage rooms should be;

- Kept clean
- Free from pests
- Kept cool and well ventilated
- Adequately lit to aid cleaning & pest detection

Products must always be stored off the floor.

6.2.4 Cold Storage

This includes refrigerators, freezers, cold rooms & cold display units.

The design of the units used should be such that;

- They must be easy to clean
- Linings and shelves should be non-corroding and impervious

- The capacity should be sufficient for it's intended use, provide adequate separation, yet must not be overloaded
- Any lids or doors should be fitted with effective seals
- They are maintainable in effective working order and serviced regularly

If separate storage units are not available, raw and ready to eat foods should be stored on different shelves with raw and defrosting foods stored below ready to eat products.

Stock rotation should be observed with any out of date foods being removed and discarded.

Staff should be trained to ensure that unit doors are open for as little time as possible to ensure that temperatures remain constant.

The temperature of freezers should be maintained at -18˚C or below, whilst refrigerators should be maintained at between 0˚C and 8˚C. A system must be in place to monitor and record food temperatures and the records must be made available for inspection when required.

There should be a documented 'breakdown' procedure in place detailing the appropriate action to be taken in case of any breakdown, or loss of power to the cold or frozen food storage units. This should cover safe storage, use and/or disposal of foods.

6.2.5 Thermometers

Sufficient thermometers should be provided to ensure that food temperatures are checked at appropriate times during delivery, preparation and service. Where probe or contact thermometers are used it is also necessary to provide antiseptic wipes to ensure adequate cleaning. Thermometers should be calibrated regularly to ensure they are working correctly.

6.2.6 Food Preparation & Cooking

During preparation it is essential to maintain separation between raw and ready to eat foods. If possible different preparation surfaces and equipment should be used. It is necessary to ensure that all surfaces are thoroughly cleaned and disinfected after use and also between uses when used for different food types.
The use of colour-coded equipment including cleaning cloths can assist in preventing contamination between raw and cooked foods.

When cooking or reheating foods; a temperature of at least 75˚C at the centre must be achieved. Temperatures should be monitored and recorded.

Where foods are to be cooled for future use or to be served cold they should be cooled as quickly as possible in a designated cooling area.

Frozen foods being thawed for use should be separated from other foods and the thawed liquid should be prevented from coming into contact with any other foodstuffs. The final temperature and time taken to thaw frozen foods should be documented unless foods are thawed in a refrigerator.

6.2.7 Food Holding and Display

Once food is prepared and on display ready for serving, the equipment used should be capable of maintaining hot/cold temperatures according to the type of food on display. Hot food should be stored at 63˚C or above and cold food at 8˚C or below. Hot food should not be left on display for longer than 2 hours and cold food no longer than 4 hours.

Food temperatures must be monitored and recorded together with the time the temperature was taken. Records must be available for inspection.

Separate utensils should be used for each food type.

All foods displayed and presented for serving should be covered or protected by a sneeze guard.

6.2.8 Pest Control in food areas and Refuse

Suitable action must be taken by the management of food premises to prevent contamination by pests. Such controls will need to cover storage, preparation and refuse areas. The controls will require great diligence and are likely to include good building maintenance and an infestation control programme, usually by means of a specialist contractor linked to frequent surveillance of all areas. Good housekeeping and hygiene practices within high-risk areas, together with regular disinfection of drains and refuse areas will assist in the prevention of infestations.
Monitoring and treatment records should be maintained.

6.2.9 Staff

Staff training is essential in the management and controlling of food safety.

All food handling staff must be made aware of their individual responsibilities in the maintenance of food safety. This should include the need to notify managers of any illness. Additionally a health screening process should be carried out in consultation with medical advisors.

It should be emphasised that any food handling staff suffering from a potential food-borne disease should not work with food until cleared by a medical advisor as fit to return to work.

Written staff records should be maintained and should be available for inspection.

Staff toilets and a staff changing area should be provided so that staff can change into their working clothes away from the food handling areas.

All staff should be trained in the maintenance of good personal hygiene prior to handling food. This should include all necessary hand washing routines.

Suitable hand washing facilities must be provided throughout the food handling area.

The wearing of suitable protective clothing including head covering should be encouraged and the wearing of jewellery, false nails, etc should not be allowed.

Eating, drinking, smoking and spitting should be prohibited in food handling areas.

7 Legionnaires Disease

7.1 What is Legionnaires Disease?

A form of pneumonia which kills about 13% of those infected and is caused by the Legionella bacteria. Legionella bacteria can also cause less serious illnesses. Signs of illness usually appear 3 to 6 days after infection but may take longer.

7.2 How is Legionnaires disease caught?

By breathing in water spray that contains the Legionella bacteria. Water spray can be produced from running a tap, flushing a toilet, some types of air conditioning units, running a shower or from bubbles rising through water in a spa pool or fountain. The bacteria multiply best in water within the temperature range of 20℃ to 45℃. They can be readily found in natural water such as rivers, lakes and reservoirs but in low numbers. High numbers are associated with inadequately controlled hot and cold water systems and with wet cooling systems in buildings.

Wherever water sprays can be created there is a risk of infection e.g. showers and taps, spa baths and whirlpool baths, Turkish baths and saunas, cooling towers and evaporative condensers (even if situated on the roof or in the grounds), garden irrigation systems, ornamental fountains (particularly indoors), and humidified food displays.

7.3 Where can Legionella multiply?

- Hot and cold water tanks/cisterns - Warm water between 20℃ and 45℃
- Pipes with little or no water flow (this includes unoccupied rooms)
- Slime (biofilm) and dirt on pipe and tank surfaces
- Rubber and natural fibres in washers and seals
- Water heaters and hot water storage tanks
- Scale in pipes, showers and taps.

These situations and conditions encourage the growth of Legionella bacteria and increase the risk of infection to hotel customers and staff.

7.4 Reducing the Risk

The risk of Legionnaire's disease can be significantly reduced by following a number of simple control measures. All hotels should have an active Legionella control programme to ensure the safety of their customers. Such a control plan should include the Legionella Control 14 Point Action Plan as detailed below.

7.5 Guidelines for Hoteliers - the Legionella Control 14-point checklist

1. Have one named person responsible for Legionella control.
2. Ensure the named person is trained in control of Legionella and other staff are trained to be aware of the importance of their role in controlling Legionella.
3. Keep hot water hot and circulating at all times: 50℃-60℃ (too hot to put hands into for more than a few seconds).
4. Keep cold water cold at all times. It should be maintained at temperatures below 20℃
5. Run all taps and showers in guest rooms for several minutes at least once a week if they are unoccupied and always prior to occupation.
6. Keep showerheads and taps clean and free from scale.
7. Clean and disinfect cooling towers and associated pipes used in air conditioning systems regularly - at least twice a year.
8. Clean and disinfect water heaters (calorifiers) once a year.
9. Disinfect the hot water system with high level (50mg/l) chlorine for 2-4 hours after work on water heaters and before the beginning of every season.
10. Clean and disinfect all water filters regularly - every one to three months.
11. Inspect water storage tanks, cooling towers and visible pipe work monthly. Ensure that all coverings are intact and firmly in place
12. Inspect the inside of cold water tanks at least once a year and disinfect with 50mg/l chlorine and clean if containing a deposit or otherwise dirty.
13. Ensure that system modifications or new installations do not create pipe-work with intermittent or no water flow.
14. If there is a spa pool (also known as whirlpool spas, "Jacuzzis", spa baths) ensure that:
    - 14.1. It is continuously treated with 2-3mg/l chlorine or bromine and the levels are monitored at least three times a day.
    - 14.2. At least half of the water is replaced each day
    - 14.3. Sand filters are backwashed daily
    - 14.4. The whole system is cleaned and disinfected once a week.
    - 14.5. Daily records of all water treatment readings such as temperature and chlorine concentrations are kept and ensure the manager checks them regularly.

8 Appendix 1

Fire Fighting Equipment

Fires are classed according to what is likely to be burning.

Fire extinguishers should generally be provided depending on what is likely to be burning within each area of a property. Fire classes and extinguisher ratings are shown in the table below.

Class of fire	Description
Class **A**	Fires involving solid materials such as wood, paper or textiles.
Class **B**	Fires involving flammable liquids such as petrol, diesel or oils.
Class **C**	Fires involving gases.
Class **D**	Fires involving metals.
Class **F**	Fires involving cooking oils such as deep-fat fryers.

Note: It is very unlikely that fires involving material in the shaded boxes will occur in premises providing sleeping accommodation. The types of fire referred to require special training to deal with and should not be tackled by untrained individuals.

Where the fire risk is not confined to a particular location, e.g. Class A fires, the fire extinguishers should be positioned on escape routes, close to the exit from the room or floor, or the final exit from the building. Similarly, where the particular fire risk is specifically located, e.g. flammable liquids, the appropriate fire extinguisher should be near to the hazard, located so that they can be safely used. They should be placed on a dedicated stand or hung on a wall at a convenient height so that employees can easily lift them off (at about 1m for larger extinguishers, 1.5m for smaller ones, to the level of the handle). Ideally no one should have to travel more than 30m to reach a fire extinguisher.

The following paragraphs describe the different types of extinguisher. The colour referred to is the colour of the extinguisher or the colour-coded area.

Water extinguishers (red)

This type of extinguisher can only be used on Class A fires. They allow the user to direct water onto a fire from a considerable distance. A 9-litre water extinguisher can be quite heavy and some water extinguishers with additives can achieve the same rating, although they are smaller and therefore considerably lighter. This type of extinguisher is not suitable for use on live electrical equipment.

Foam extinguishers (cream)

This type of extinguisher can be used on Class A or B fires and is particularly suited to extinguishing liquid fires such as petrol and diesel. They should not be used on free-flowing liquid fires unless the operator has been specially trained, as these have the potential to rapidly spread the fire to adjacent material. This type of extinguisher is not suitable for deep-fat fryers or chip pans.

Powder extinguishers (blue)

This type of extinguisher can be used on most classes of fire and achieve a good 'knock down' of the fire. They can be used on fires involving electrical equipment but will almost certainly render that equipment useless. Because they do not cool the fire appreciably it can re-ignite. Powder extinguishers

can create a loss of visibility and may affect people who have breathing problems and are not generally suitable for confined spaces.

Carbon dioxide extinguishers (black)

This type of extinguisher is particularly suitable for fires involving electrical equipment as they will extinguish a fire without causing any further damage (except in the case of some electronic equipment e.g. computers). As with all fires involving electrical equipment, the power should be disconnected if possible.

Wet chemical extinguisher

This type of extinguisher is particularly suitable for commercial catering establishments with deep-fat fryers.

Selection, installation and maintenance of portable fire extinguishers

All portable fire extinguishers will require periodic inspection, maintenance and testing. Depending on local conditions such as the likelihood of vandalism or the environment where extinguishers are located, brief checks should be carried out to ensure that they remain serviceable. In normal conditions a monthly check should be sufficient. Maintenance by a competent person should be carried out annually.

Fire blankets

Fire blankets should be located in the vicinity of the fire hazard where they are needed, but in a position that can be safely accessed in the event of a fire. They are classified as either light duty or heavy duty. Light duty fire blankets are suitable for dealing with small fires in containers of cooking oils or fats and fires involving clothing.

9 Appendix 2

Bed Bug Fact Sheet

What are bed bugs?

They are nocturnal parasitic insects which feed on the blood of humans and other mammals.

Where can they be found?

They are found world-wide and throughout the UK. By day they hide in cracks and crevices in beds, furniture, wallpaper and skirting boards etc, emerging when hungry, usually every few days, to feed.

Heavily infested rooms may carry a distinctive and unpleasant almond-like smell, which is given off by the bed bugs' 'stink glands'.

'Blood spotting' on bed linen may also indicate activity as the fully fed bugs excrete excess water before returning to their narrow crevices.

Are bed bugs harmful?

They are not regarded as disease carriers but their blood feeding can cause severe irritation in some people, resulting in loss of sleep and lack of energy, particularly in children.

Their bite often gives rise to a hard, whitish swelling, distinguishable from a flea bite, which leaves a dark red spot surrounded by a reddened area.

How to eradicate bed bugs

Once a bed bug infestation has been confirmed, it is important that a reputable pest control company carries out a thorough treatment with a residual insecticidal spray or powder. It may be necessary to treat on more than one occasion to completely eradicate the bed bugs.

To achieve the best results from a bed bug treatment it is important to carry out the following steps:

1. Thoroughly vacuum clean all floors and upholstered furniture to remove animal hair, debris, eggs and pupae. Pay particular attention to known harbourages such as bedrooms and other sleeping areas. The vacuum bag must be disposed of in a plastic bag in an outside bin

2. Remove all bed linen and clothing from infested areas and wash them on the hottest wash possible

3. Move any furniture and remove toys, loose articles etc from the floor so that as much of the area can be treated as possible

4. Where possible, completely dismantle beds and other known harbourages to allow them to be thoroughly treated

5. Empty wardrobes, drawers etc and wash the contents on the hottest wash possible

6. Sweep and wash or vacuum clean, tiled, concrete, wooden floors etc

7. Remove all children, pets and other people during the treatment and ensure that aquariums are removed or covered, as fish are particularly susceptible to insecticides. Any open food should be covered or removed.

Following the treatment

You may see bed bug activity for several days after the treatment. This is not unusual and may be due to newly hatched bed bugs, which have not yet come into contact with the insecticide. These insects will eventually die but can be treated with a normal insecticidal spray (aerosol) which can be purchased from any supermarket, hardware shop or chemist. Chemicals may also be obtained from your Pest Control Contractor.

Infested rooms should not be used by customers until no