National Operational Guidance Programme

Local Government Association | CFOA Chief Fire Officers Association | in partnership with LFB London Fire Brigade

Title:	Operations
Project Executive:	CFO Steve Apter, Isle of Wight FRS
Synopsis:	This is all-incident guidance, providing information that firefighters may use, irrespective of the incident type or activity. Operations guidance should be read and applied alongside all other guidance documents.
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Latest Position:	First edition version one published 16/04/2015 First edition version two published 17/11/2015 Examples added to the control measure actions in the section entitled 'Use information management systems'. Second edition version one published 20/12/2016 Addition of tactical actions and some hazads and control measures. Refer to the configuration log to see the differences between first edition version two and second edition version one.

National Operational Guidance – Operations second edition version one (ARCHIVED on 20-09-2017)

Introduction

The structure of this guidance follows the style and format of the fire and rescue service National Operational Guidance Programme. It relates to specific hazard and control measures following a literature review. The control statements support a fire and rescue service in developing policies and procedures that deliver the 'safe person concept' at all incidents.

This guidance supports fire and rescue authorities in putting a robust emergency response in place for all incidents. It is an essential part of the safe systems of work needed, from the point of receiving a call to considering learning after the incident closes.

In this document the term 'Incident' means any event where a fire and rescue service receives a call for help that results in an electronic record being created. An emergency resource does not have to be deployed in response to the call.

Operational response is hazardous and firefighters respond to thousands of incidents, across a wide variety of types, each year. Only simple actions and procedures are needed for some incidents to be dealt with safely as risks are low. Others are more challenging, and may quickly increase in size, complexity and duration. This guidance specifically deals with the hazards present at all incidents. The guidance provides a number of potential control measures – fire and rescue services can build on these according to their local risk assessment.

The hazards identified in this document could cause harm to the organisation, to fire and rescue service personnel or the community in which they operate.

Responsibilities of fire and rescue services

Fire and rescue services are responsible, under legislation and regulations, for developing policies and procedures and to provide information, instruction, training and supervision to their personnel about foreseeable hazards and the control measures used to reduce the risks arising from them.

This guidance sets out to provide fire and rescue services with sufficient knowledge about the potential hazards their personnel could encounter when attending incidents. Fire and rescue services should ensure their policies, procedures and training cover all of the hazards and control measures contained in this guidance.

The Fire and Rescue Services Act 2004

This Act is the principal legislation for the fire and rescue services of England and Wales. It describes the duties and powers of fire and rescue authorities in providing a fire and rescue service.

Sections 7, 8 and 9 describe the duties placed on fire and rescue authorities for providing an operational response. Section 11 and 12 give fire and rescue authorities the power to respond to other types of emergency than those described in sections 7, 8 and 9.

Similar provisions exist in the Fire Scotland Act 2005 and the Fire and Rescue Services (Northern Ireland) Order 2006.

Health and Safety at Work, etc. Act 1974

In relation to health and safety, this Act applies to all employers. It is a wide ranging piece of legislation but in very general terms it imposes the general duty on fire and rescue authorities to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all of their employees (section 2(1)) and of those persons not in fire and rescue service employment who may be affected by fire and rescue service activity (section 3(1)). A fire and rescue service employee also has a duty to take reasonable care for the health and safety of him/her self and of other persons who may be affected by his/her acts or omissions at work.

The relevant sections of this Act apply equally to the whole of the UK.

Management of Health and Safety at Work Regulations 1999

Among other things these regulations require fire and rescue authorities to:

- Make suitable and sufficient assessment of the risks firefighters may be exposed to while they are on duty, and which may affect their health and safety (Regulation 3(1)(a))
- Implement any preventive and protective measures on the basis of the principles specified in the regulations (Regulation 4)
- Make arrangements for the effective planning, organisation, control, monitoring and review of the preventive and protective measures (Regulation 5)
- Provide such health surveillance as is appropriate with regard to the risks to health and safety that are identified by the risk assessment (Regulation 6)

Safety Representatives and Safety Committees Regulations 1977 (as amended) and Codes of Practice provide a legal framework for employers and trade unions to reach agreement on arrangements for health and safety representatives and health and safety committees to operate in their workplace.

Health and Safety (Consultation with Employees) Regulations 1996 (as amended), sets out the legal framework that will apply if employers have employees who are not covered by representatives appointed by recognised trade unions.

Control of Substances Hazardous to Health Regulations 2002

Fire and rescue authorities must ensure that the exposure of firefighters to substances hazardous to health is either prevented or, where prevention is not reasonably practicable, adequately controlled (Regulation 7(1)). Where it is not reasonably practicable for fire and rescue authorities to prevent the hazardous exposure of firefighters, fire and rescue authorities must, amongst other things, provide firefighters with suitable respiratory protective equipment (that must comply with the Personal Protective Equipment Regulations 2002 and other standards set by the Health and Safety Executive).

Dangerous Substances and Explosive Atmospheres Regulations 2002

Fire and rescue authorities are obliged to eliminate or reduce risks to safety from fire, explosion or other events arising from the hazardous properties of a ‘dangerous substance’. Fire and rescue authorities are obliged to carry out a suitable and sufficient assessment of the risks to firefighters where a dangerous substance is, or may be, present (Regulation 5). Fire and rescue authorities are

required to eliminate or reduce risk so far as is reasonably practicable. Where risk is not eliminated fire and rescue authorities are required, so far as is reasonably practicable and consistent with the risk assessment, to apply measures to control risks and reduce any detrimental effects (regulation 6(3)). This includes providing suitable personal protective equipment (Regulation 6(5) (f)).

Confined Spaces Regulations 1997

A firefighter must not enter a confined space to carry out work for any purpose unless it is not reasonably practicable to achieve that purpose without such entry (regulation 4(1)). If entry to a confined space is unavoidable, firefighters must follow a safe system of work (including using breathing apparatus) (Regulation 4(2)) and put adequate emergency arrangements in place before the work starts (Regulation 5).

The Work at Height Regulation 2005 (as amended)

This regulation replaces all of the earlier regulations relating to working at height. The Work at Height Regulations 2005 consolidates previous legislation on working at height and implements European Council Directive 2001/45/EC concerning minimum health and safety requirements for the use of equipment for work at height (The Temporary Work at Height Directive).

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995

In this section, Regulation 3 is particularly relevant because it requires fire and rescue authorities to notify the Health and Safety Executive of any 'dangerous occurrences'. Some examples of dangerous occurrences as defined in Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR) that are relevant to fire and rescue service operations at tunnels and underground incidents include: "any unintentional incident in which plant or equipment either (a) comes into contact with an uninsulated overhead electric line in which the voltage exceeds 200 volts; or (b) causes an electrical discharge from such an electric line by coming into close proximity to it."

Data Protection Act 1998

The Act prescribes appropriate arrangements for storing, obtaining, holding, using or disclosing an individual's personal information. Personal data may be obtained directly by obtaining contact information for individuals in respect of specific sites, or by obtaining contact details on lists of specialist advisers, as examples. It may also be obtained indirectly, such as listing premises or locations where the circumstances of the individuals may identify personal information. Examples of indirectly obtained data may include people residing in a vulnerable persons' refuge, or for example, where their form of medical treatment results in the fire and rescue authority holding information regarding the use of medical gases, which may be regarded as personal information. Fire and rescue authorities who gather information that includes personal data appear to be 'data controllers', as defined by the Act. They have duties in relation to that data.

Fire and Rescue National Framework

There are national frameworks for England, Wales and Scotland. Their purpose is to provide strategic direction without specifying the method of delivery. The document encourages the communities to set the local direction.

Risk management plan

Each fire and rescue authority must develop their strategic direction through their risk management plan. To determine the extent of their firefighting capability, strategic managers will consider their statutory duties and the foreseeable risk within their area.

Work to identify risk and prepare operational plans should consider all stakeholders, including local emergency planning groups and the fire and rescue service risk management plan.

Hazard and control statement

Hazard	Control measures
Emergency fire control room operations	
Equipment failure	Provide multiple communications bearers Provide a critical contact number Establish an alternative fire control facility Consider Direct Electronic Incident Transfer (DEIT) / Multi Agency Incident Transfer (MAIT) Provide hard copy for call processing information Provide IT support
Failure to handle emergency calls and mobilise resources in a timely manner	Consider salutations Use EISEC/CLI Use the Geographical Information System (GIS) Use Automatic Vehicle Location System (AVLS) Use Next Generation Text (NGT) service Use an interpreter call handling agency Record call details Use the communications or mobilising system recording facility Use the mobilising system premises based gazetteer Use incident typing Prompt call information Hold contact information for category 1 and 2 responders

Loss of, or failure to correctly store accurate incident data	Use the mobilising and communication system Follow the standard message process
Time of alert to time of attendance	
Impaired mental and physical ability caused by alert/notification to respond	Monitor health and fatigue Maintain individual situational awareness Wear safe clothing and footwear Provide a safe environment
Road traffic collisions	Encourage safe response drivers, passengers and road users Ensure safe vehicles
Mobilised resources failed or delayed attendance at incidents	Ensure reliable and efficient transport and communication arrangements
Incident related hazards en route to and on attendance at the incident	Use local knowledge Use effective navigation Make a safe and controlled approach to the incident Gain access /entry
Risk information gathering	
Failure to identify foreseeable risk	Fulfil legislative responsibilities Produce a risk management plan Produce Site-Specific Risk Information Produce emergency response plans Consider national guidance
Failure to receive accurate, timely and relevant information	Make arrangements for emergency call management Adopt an information management methodology Use tactical advisers and responsible or competent persons Situational awareness Consider non-technical skills
Failure to access the information	Use information management systems

	Secure access Use non-technical skills
Failure to interpret information	Use common terms and symbols Consider non-technical skills Clearly defined command roles and responsibilities, incorporating multi-agency arrangements
Failure to transfer information	Risk assessment at an incident Have a communication strategy Clearly defined command roles and responsibilities, incorporating multi-agency arrangements
Failure to review information	Establish an assurance process Manage performance
Failure to record information	Take legislative duties into account Use national incident recording systems (IRS) Use debrief management systems Use information management systems
Failure to share information	Consider intra-operability and interoperability Use common terms and symbols Liaise with local emergency planning groups
Health, Safety and Welfare – Hazards that exist at every incident	
Failure to manage health, safety and welfare	Undertake pre-planning • Consider engineering controls • Consider training and competence • Assess risk from lone working Follow safe person principles Identify and communicate hazards Eliminate the hazard Reduce exposure to the hazard Isolate the hazard Control the hazard Wear personal protective equipment (PPE) and/or

	respiratory protective equipment (RPE) Consider welfare Follow post-incident protocols Have appropriate health surveillance
Physical hazards	Manage hazards in the physical environment
Falls from height	See National Operational Guidance: Sub-surface, height and structures (To follow)
Bodies of water	Manage risk from bodies of water
Extremes of temperature	Manage physiological stress
Noise	Reduce risk from exposure to noise
Vibration	Reduce risk from exposure to vibration
Heavy and bulky objects	Adopt correct manual handling techniques
Moving vehicles	Manage vehicle movements
Animals	Manage risk from animals
Biological hazards	Manage risk from biological hazards
Body fluids	Manage risk from body fluids
Waterborne microorganisms	Manage risk from waterborne microorganisms
Chemical hazards	Manage risk from chemical hazards
Psychological hazards	Manage risk from psychological hazards
Involvement of people	Situational awareness Establish appropriate cordon controls Establish casualty care arrangements Request Police support and assistance Consider evacuation of people Warn, inform, instruct and update people Plan reception centres
Incident closure and handover – preparing for redeployment	

Closing an incident too early	Clearly defined command roles and responsibilities, incorporating multi-agency arrangements
Relaxation of command and control during 'make up' operations	Follow safe person principles Clearly defined command roles and responsibilities, incorporating multi-agency arrangements Incident ground safety management
Failure to make resources ready for redeployment or otherwise before leaving the incident ground	Communicate availability of resources Consider welfare Ensure effective organisation of the incident ground Manage, inspect and test equipment Wear personal protective equipment (PPE)
Failing to leave the incident ground in a safe state	Make an effective handover to the responsible person Consider community recovery
Failing to identify and communicate learning opportunities	Carry out post incident investigations Hold debriefing or post incident reviews

Emergency fire control room operations

Hazards and control measures related to the handling of emergency calls and the mobilisation of fire service resources.

Hazard - Equipment failure

Hazard	**Control measures**
Equipment failure	Provide multiple communications bearers Provide a critical contact number Establish an alternative fire control facility Consider Direct Electronic Incident Transfer (DEIT) and Multi Agency Incident Transfer (MAIT) Provide hard copy for call processing information Provide IT support

Hazard knowledge

Equipment failure in the fire control room can take several forms, including call handling equipment, mobilising equipment and software or communications equipment between fire control rooms and operational resources.

Fire and rescue service resources are mobilised through a number of separate software applications and hardware systems. In addition, the various methods of communication rely on both software and hardware systems. These systems should be regularly maintained to ensure they are readily available for emergency calls handling and mobilising.

Call handling equipment failure

All fire and rescue services are responsible for providing the means of receiving emergency calls (Fire and Rescue Services Act 2004 and regional equivalents) and keeping the person responsible for liaising with the call handling agency on the 999/112 service (the '999/112 liaison point') informed of the equipment and the public switch telephone network (PSTN) connections used in every fire control room. To support any unforeseen situation, fire and rescue services must provide equipment that is capable of functioning at all times. The system should be capable of operating through unplanned events such as telephone exchange failure, power failure or hardware failure. The number of calls being received should not prevent emergency calls from being connected to a fire control operator. Three separate routes should be provided for the call handling agency to contact the fire and rescue service. The secondary and tertiary routes would normally only be used if there is an unusually high level of calls or a fault on the primary line. Fire and rescue services should reserve primary lines exclusively for receiving 999/112 calls. A code of practice, known as the Code of Practice for the Public Emergency Call Service (PECS) exists between the emergency services and the call handling agencies to ensure best practice for a quick response to emergency calls. This code of practice is constantly under review by the 999 liaison committee which is chaired by the Fire Policy Unit of the Department for Communities and Local Government (DCLG)

Mobilising equipment failure

The main function of the mobilising system is to aid in recording call information and dispatching the selected resources. Secondary functions include displaying alarm conditions for the system and generating statistical information.

When an incident type and address is entered the system will interrogate its database to match the address information. It may also search for risks, duplicate incidents, telephone kiosks, map references, historical data and so on, to provide the operator with as much information as possible. When an address match is made the operator is presented with a pre-determined attendance from the address-based gazetteer. The system makes recommendations, which can be overridden by the operator. The mobilising system also maintains a log for each incident, recording all times and actions associated with that incident.

The mobilising system will also include an interface with remote equipment so that turnout messages can be transmitted. These messages can be sent to resources in a number of ways – for example, data messages may be sent to a computer located in a fire station or other location where resources may be based, even temporarily. Data links between the mobilising system and the station-end equipment can be provided in a number of ways, such as the wide area network and the Public Switched Telephone Network. Multiple bearers are usually employed for resilience.

In the same way that multiple bearers provide resilience against failure in communication routes, data storage and transfer should have in built resilience and disaster recovery. Industry standards for this are constantly being updated as technology progresses.

In most instances the communications network will comprise a primary, secondary and tertiary back-up bearer.

Communications equipment failure

Fire and rescue services must provide the means for receiving emergency calls. The communication systems adopted may integrate telephone and radio voice services into a common platform that may be able to:

- Provide clear audio and visual distinction between emergency and non-emergency telephone calls and radio traffic
- Queue telephony traffic and present priority calls at the top of the queue.
- Provide an indicator to fire control operators as to how long a call has been in a queue.
- Manage radio traffic
- Direct certain telephone call types or call priorities to certain workstations
- Redirect these calls if there is no one available to answer them or they are not answered within a certain time (Automatic Call Distribution – ACD)
- Allow supervisors to audio monitor calls
- Allow supervisors to eavesdrop calls and messages
- Record and provide instant playback of calls
- Manage radio assets
- Serve more than one control room e.g. a collaboration

If this system fails, it would cause disruption to the day to day working of the fire control room. Fire and rescue services should have in place support mechanisms to alleviate this.

Control measure – Provide multiple communications bearers

Control measure knowledge

It is foreseeable that single communication lines such as the PSTN could fail temporarily. Where this is the case it is vital that the call handling agency can still quickly connect an emergency call to fire control room. It is less likely, but still foreseeable, that any alternative line of communications could also fail.

A number of possible routes of communication are available to connect a call handling agency to an emergency control room. These include fixed private wire systems, public telephone systems, voice over internet provider systems and mobile communication systems. As with all technological solutions the means for communicating are changing all the time.

Some fire and rescue services have arrangements in place for calls to be handled by other emergency control rooms if the call handling agency is not able to quickly connect to a control room operator.

(PECS Code of Practice, January 2011)

In the same way as lines between call handling agencies and fire control rooms should be duplicated, it is also possible to provide multiple bearers for the mobilising system and communications system.

The mobilisation message to a fire station can be via the fire and rescue services wide area network, PSTN, private wire or mobile network. When considering back up bearers it is good practice to spread the risk across more than one of these bearer types.

With communications to resources, which are not at a fire station, a nationally procured solution is currently used for the main communications bearer. However, data and voice traffic can also be passed by mobile or satellite networks. This again spreads the risk of failure and ensures fire and rescue services can meet their duties (Fire and Rescue Services Act 2004).

Strategic actions

Fire and rescue services should:

- Ensure they are aware of current good practice in providing reliable communications lines between call handling agencies and the fire control room and between fire control rooms and operational resources
- Ensure they have three routes into the fire control room and that at least one of these uses a separate network from the others. They should also consider multiple bearers for mobilising systems and communications.

Tactical actions

Fire control room operators should:

- Implement service resilience procedures in an equipment failure (business continuity plan)

Control measure – Provide a critical contact number

Control measure knowledge

For problems to be resolved quickly it is important for the call handling agency and the fire control room manager to be able to communicate. This will be undertaken where call volume is high, call handling times are significantly longer than usual or the call handling agency has staffing problems.

(PECS Code of Practice, January 2011)

(Code of Practice for the Public Emergency Call Service 2009 V1.5 2011)

Strategic actions

Fire and rescue services should:

- Provide a specific number for call handling agency managers to contact fire and rescue service control supervisory managers, when there are any emergency call handling problems

such as call surges, call answering times, staffing difficulties and other problems, so that corrective actions can be agreed

- Enter into agreements with other fire and rescue services to accept calls from call handling agency managers where the call handling agency manager is unable to get a response from the critical contact number

Tactical actions

Fire control room operators should:

- Implement procedures for dealing with calls originally directed to another fire and rescue service or other critical contact number

Control measure – Establish an alternative fire control facility

Control measure knowledge

Control mobilising systems incorporate a number of levels of resilience. Duplicated computer systems and fall back bearers each add their own levels of security to the system, as does the ability to alert crews locally from stations.

These facilities do not, however, cater for the rare possibility of having to evacuate the main control room. Where this occurs, a fire and rescue service should have in place a means to continue to receive emergency calls and mobilise resources. This can be achieved by having a secondary location from where the fire control function can be quickly re-established or by entering into an agreement with another organisation to temporarily take over these duties.

Different mobilising systems offer different secondary control provisions, ranging from a portable laptop computer to a mobilising system and communications interface within a duplicate control on the same site as the main control, or at a remote location.

Secondary control facilities should be capable of receiving emergency and other incoming and outgoing calls, mobilising resources and operating the main scheme radio at a location that would not be affected by any disruption to services provided at the main control. This may necessitate establishing the secondary control with emergency telephone lines from a different exchange to those of the main control.

Strategic actions

Fire and rescue services should:

- Have policies in place to allow all emergency call management and mobilising functions to continue in the event of a catastrophic failure of the fire control room
- Where the policy is to be implemented by a third party, consider entering a formal contract to ensure any standards are able to be met

Control measure – Consider Direct Electronic Incident Transfer (DEIT) /Multi Agency Incident Transfer (MAIT)

Control measure knowledge

The Highways Agency and some police forces use Direct Electronic Incident Transfer (DEIT) to send key incident details to each other's mobilising systems electronically. DEIT uses protocols to allow interoperability between mobilising systems from different manufacturers.

The main driver for using DEIT in the fire and rescue service is its potential to deliver quick, reliable information exchange between all fire and rescue control rooms as well as those of other agencies. This saves time and provides a clear understanding of the assistance required to resolve an incident. It is believed that DEIT would be particularly useful in spate conditions, assisting control rooms in recording incident details on their mobilising system and passing them directly into a queue on the mobilising system of the affected control, for their attention. See:

www.bapco.org.uk/.../2013_11_mait_british_apco_update_v1.0.pdf

https://standards.data.gov.uk/challenge/multi-agency-incident-transfer

(PECS Code of Practice, Draft 4, March 2014)

Strategic actions

Fire and rescue services should:

- Consider the introduction of DEIT as part of their resilient control room policies

Control measure – Provide hard copy for call processing information

Control measure knowledge

High standards of resilience mean that the likelihood of needing to record call information in hard copy is very slim. However, this way of working has been used during spate conditions, when receiving an influx of calls that have no life risk. In a system failure, it is good practice for fire and rescue services to have the facility to record all incident details and to have information on the correct type of resource to be mobilised along with risk information for any incident.

This can be done through various methods such as tablets, stand-alone computers or paper systems.

Strategic actions

Fire and rescue services should:

- Maintain a means to temporarily record emergency calls and operational information on hard copy
- Have a procedure in place to ensure that when systems return to normal any hard copy data is recorded in the mobilising system

Control measure – Provide IT support

Control measure knowledge

Communications and information systems and the hardware that supports them are complex. It is likely that some or all of these systems may periodically fail. These failures may affect the control room operator's ability to mobilise the most appropriate resource quickly. Further support for resilience planning and control room equipment security may be considered good practice.

Maintaining the efficiency of systems should be an ongoing process, to ensure they are performing to the highest standard and that all mobilising data displayed is current.

As part of the specification, fire and rescue services may consider having system suppliers deliver professional training on all equipment. This may include customised courses for essential users and first line maintenance courses for control room managers so they can work alongside system engineers when a problem occurs.

As part of any contractual agreement with suppliers, fire and rescue services may consider various maintenance agreements suited to their own organisational requirements.

Strategic actions

Fire and rescue services should:

- Ensure they consider maintenance and upgrades as part of the initial design stages when tendering for new fire control room software and hardware
- Have arrangements in place for resolving failures of both software and hardware quickly, 24 hours a day

Tactical actions

Fire control room operators should:

- Identify signs and symptoms of software or hardware failure and implement procedures to inform relevant people to prevent a failure at a later point in time (fall-back position)

Hazard – Failure to handle emergency calls and mobilise resources in a timely manner

Hazard	Control measures
Failure to handle emergency calls and mobilise resources in a timely manner	Consider salutations Use EISEC/CLI Use Geographic Information System (GIS) Use Automatic Vehicle Location System (AVLS) Use Next Generation Text (NGT) service Use an interpreter call handling agency Record call details Use the communications or mobilising system recording facility Use the mobilising system premises based property gazetteer Use incident typing

	Prompt call information Hold contact information for category 1 and 2 responders

Hazard knowledge

Fire control room operators should have the knowledge to identify the capabilities and location of all fire and rescue service resources and specialist equipment. This will aid them when making decisions throughout any call process. When fire and rescue service controls are busy and information is being gathered from numerous sources, or multiple calls on different incident types are being handled, fire control room operators may have to re-deploy resources from one incident to another after carrying out a dynamic risk assessment of each call.

Mobilising systems can display pre-determined attendances from their address based gazetteer and incident type list, to display the nearest resource using the Automatic Vehicle Location System (AVLS). However, fire control room operators should monitor, review and update the resource availability and movement. They can also manually override the mobilising system if a certain resource has become available nearer to an incident, reducing blue light movements. The process of receiving emergency calls, identifying the correct address and mobilising the most appropriate resources can be delayed by a number of failures. These include:

- Failing to communicate effectively with the caller
- Misrouting emergency calls by call handling agencies
- Failure in emergency call management

Failure to communicate effectively with the caller

Emergency calls are received in various ways and sometimes under difficult situations. Apart from receiving calls from known agencies, calls from the public can be challenging if not handled properly, which in turn can delay resources getting to an incident.

Initially, when dialling 999/112, callers will automatically be passed through to the call handling agency, who will then pass the call to the correct service.

On connecting a call to the fire and rescue service, the call handling agency can give a verbal handover to the fire control room operators, stating the origin details. Sometimes calls will be passed straight through with no verbal handover. The introduction of call line identification, (CLI or EISEC) Enhance Information Service for Emergency Calls, will give fire and rescue services call information on the number and address of landline telephones or the nearest cell location for mobile phones. This information is very useful but cannot be relied on as the exact location of an incident.

There may be barriers between the caller and the fire control room operators. These can be in various forms; the call could be made from a bad reception area and keep cutting in and out, it may be a Telematics mobile call, there may be a language barrier, or the call could come from a member of the public who is deaf, hard of hearing, deaf-blind or speech impaired.

These can be very difficult calls for fire control room operators to manage and extract the correct details for resources to be mobilised. The control measures in place support both caller and fire control room operators to obtain the required information. However, inevitably this could increase the fire control room operators' call handling times.

There may be occasions when calls received from call handling agencies have been misdirected or misrouted. This can either be to the wrong agency or to another fire and rescue service.

On being connected to a caller it can become apparent that the call has been misrouted by the call handling agency. The caller may actually require one of the other emergency services (such as police, ambulance or coastguard services) or a different fire and rescue service.

Misrouted calls occur where mobile handsets or exchange phone coverage areas straddle two or more fire and rescue service boundaries. The call handling agency will then nominate a fire and rescue to receive the call. Mobile handsets automatically search for the strongest signal and connect to a base station; this may not necessarily be the nearest to the location of an incident being reported, especially across river estuaries.

However, some new mobile handsets provide enhanced location information when dialling 999/112. The handset operating system can automatically use its built-in location capability to try to obtain a location using GPS or Wi-Fi information. This additional functionality doesn't affect the voice emergency call, which will be processed by the fire and rescue service operator as normal. It will allow the call handling agency to compare the cell coverage from the network and, if geographically consistent, will then replace the network location for any EISEC queries.

Technological advances mean that increasingly an emergency call can be received direct from safety equipment such as that fitted to vehicles. In this instance a voice call from a person may not be the means for asking for assistance.

Failure in emergency call management

Emergency call management processes should be followed in each emergency call. The interaction between fire control room operators and the caller can change depending on the nature of the incident, the caller's location and the pre-determined response. Mobilising systems could be able to display pre-populated questions and prompts to fire control room operators during an emergency call. The system can then link to a specific incident type list, so the correct advice is given and calls are all quality assured.

Two existing documents currently provide national emergency call handling guidance to fire control staff:

- Fire Service Circular 10/93 appendix B – Fire survival Guidance
- Fire Service Circular 54/04 – Emergency Call Management

Fire control staff use this national guidance as a support to underpin their contact with callers.

Fire control room operators are the first point of contact for the entire emergency side of the organisation. It is common to deal with people who are excitable, upset, distressed or confused. To obtain the required information fire control room operators should always be professional, supportive and calm.

Emergency calls are received in various ways and sometimes under extremely difficult situations. Apart from receiving calls from known agencies, calls from the public can be challenging if not handled properly, which in turn can delay the mobilisation of resources to an incident. When receiving call information, fire control room operators should record and input all details accurately into a mobilising system to allow the correct location to be displayed so that the correct resources are mobilised as quickly as possible.

Failure to record relevant information could restrict attending crews when they are undertaking dynamic risk assessment prior to arrival.

Call challenging

During any emergency call, fire control room operators should use their judgement to identify where to call challenge. Call challenge is the targeted questioning of a caller, enabling the control room operator to ascertain whether the attendance requires amendment. They may also identify that the call is not genuine.

Duplicate calls

When additional calls are received regarding an incident to which an attendance has already been mobilised, the fire control room operators must be made aware of any secondary information that may help to locate the incident, or understand what further action is required. This information is then relayed to other oncoming resources.

This information must be attached to the initial call sheet to enable accurate statistical data on the number of emergency calls received for that incident.

If a call indicates that there could be a second incident in the vicinity (the caller does not agree that it is the same incident and this cannot be guaranteed from looking at the map or asking ongoing crews via the radio), a second incident must be recorded and further crews mobilised. It is essential that crews going to both incidents are made aware of this to avoid any confusion and ensure dynamic risk assessments are carried out.

Filtering

When collating call information, fire control room operators will filter out calls that may not require an attendance in accordance with their risk management plan. These calls could include automatic fire alarm signals, persons locked out, flooding incidents and so on. The control room operator makes an assessment and gives relevant advice to the caller on the appropriate agencies or organisations to contact.

Spike conditions

Spike conditions occur with little or no prior warning. This is when a large number of calls to the same incident are received over a short time period, such as a car fire on the motorway or a large fire with plumes of smoke that can be seen over a wide area. These calls usually stop when emergency resources are in attendance.

Spate conditions

Spate conditions occur where a large number of calls are being received simultaneously for incidents not at the same address. An example of this is flooding caused by severe weather.

Spate conditions can sometimes be planned for. However, this may not always be the case, for example in a Marauding Terrorist Firearms Attack.

Spate conditions can go on for periods of hours or even days.

During this type of activity period, calls can be batched together and handed over to locally established control points for prioritisation and action. Where this occurs it is important that any actions are recorded in the same way as for the hard copy recording.

Control measure – Consider salutations

Control measure knowledge

The first verbal contact with the caller plays a vital part in focusing them to give correct incident details as quickly as possible. Salutations support fire control room operators in instantly engaging with a person, so that they can efficiently manage the call.

As calls are received in various ways it is helpful to have a structured approach to answering calls and taking the most important information quickly and efficiently, whilst reassuring the caller.

Strategic actions

Fire and rescue services should:

- Develop standard procedures for obtaining the most relevant information from callers. This will allow the nearest appropriate resource to be mobilised quickly.
- Develop survival guidance prompts for fire control room operators

Tactical actions

Fire control room operators should:

- Obtain information from callers using service procedures and use them where appropriate

Control measure – Use EISEC/CLI

Control measure knowledge

Enhanced Information Service for Emergency Calls (EISEC) or caller line identification (CLI) enables fire control room operators to confirm the caller's location swiftly. This is a critical first step in the call handling process, since the line could be 'cut', leaving the location unknown. EISEC technology provided by call handling agencies allows the billing address of the phone from which emergency calls are being made to be displayed to the control room operator. This speeds up the information process. This technology can also be used to locate the whereabouts of mobile phone callers, identifying the cell network from which they are calling. This is particularly useful when callers are reporting incidents on the road network and are unaware of their exact location.

Caller line identification will improve efficiency to help and minimise dialogue between the control room operator and the caller. This will in turn strengthen the 'speed and accuracy', dimension of resilience, enabling fire control room operators to reach the point of mobilising resources more effectively. (DCLG Future Control Room Services Scheme September 2013, Annex E, Page 65)

Strategic actions

Fire and rescue services should:

- Consider using EISEC/CLI location information. When a call is received, the EISEC/CLI instantly gives the control room operator location information that can be used as a guide to the potential location of the emergency. This aids the fast mobilisation of resources.

Control measure – Use the Geographical Information System (GIS)

Control measure knowledge

Fire control rooms benefit from being able to clearly visualise caller, incident, resource, and in some cases, risk data. The map-based visualisation of information provided by geographical information systems (GIS) helps them to make more informed decisions.

Many resources deployed by fire and rescue services now carry communication equipment that makes use of the Global Positioning System (GPS) to provide details of location. These are usually referred to as 'automatic resource' or 'automatic vehicle location systems' (ARLS or AVLS). This information can be displayed on the GIS in control rooms, enabling fire control room operators to confirm the locations of resources.

The GIS functionality in mobilising systems may enable fire control room operators to attach or create risk information for specific locations. They may, for example, denote temporary road closures, planned major events, site-specific risk information (SSRI), hydrant data, tactical and COMAH plans. These can aide mobilising decisions and may also be used to provide information to crews.

Strategic actions

Fire and rescue services should:

- **Confirm the location of an incident:** when the location details for an incident are entered into the incident capture form on the mobilising system (either from EISEC or manually by the operator), the incident location can be displayed on the GIS. If there is any doubt or ambiguity about the information the caller is providing, fire control room operators can refer to the map on GIS to obtain information on adjacent properties, streets and landmarks. This can be used to confirm any location on any incident
- **Select deployment points:** the GIS supplied with some mobilising systems enables Control Staff to 'click' on the GIS to designate the location of an incident, rendezvous point or deployment point rather than selecting from the gazetteer. This provides useful information on larger incidents, for example general hospitals, motorways and trunk roads and gives a more precise location of incidents and information to responding crews
- **Display the location of resources:** use GIS linked to AVL software to show the location of available fire and rescue resources
- **Display the availability of resources:** the operational status of a resource can be displayed on the GIS. This enables fire control room operators to view the availability of resources
- **Validate resource proposals:** fire control room operators can use the GIS information for resource status information, which validates resources proposed by mobilising systems. This

ensures that the nearest appropriate resources are dispatched to an incident. It will also provide a sense check for search engines embedded in the mobilising systems

- **Inform closing - in move**s**:** using the operational status and location information provided by the GIS, fire control room operators make informed decisions on fire cover moves. If an area is depleted of fire cover but resources are available on mobile duties nearby, fire control room operators may choose to send a standby appliance to an empty station or area
- **Add risk information:** the GIS functionality in mobilising systems may enable fire control room operators to attach or create risk information for specific locations. They may, for example, denote temporary road closures, planned major events, site-specific risk information (SSRI), hydrant data, tactical and COMAH plans. These can aid mobilising decisions and may also be used to provide information to crews

Tactical actions

Fire control room operators should:

- Use relevant resources such as GIS mapping to obtain further information on adjacent properties, streets and landmarks to confirm the location of the incident. This is especially applicable where there is doubt or ambiguity about the information the caller is providing
- Designate the location of an incident and, where appropriate, rendezvous or deployment point
- Retrieve and mobilise the nearest relevant resources after collating call handling information and retrieving the correct pre-determined attendance
- Validate resource proposals: Fire control room operators can use the GIS information for resource status information, which validates resources proposed by mobilising systems. This ensures that the nearest appropriate resources are dispatched to an incident
- Inform closing-in moves: Using the operational status and location information provided by the GIS, fire control room operators make informed decisions on fire cover moves. If an area is depleted of fire cover but resources are available on mobile duties nearby, fire control room operators may choose to send a standby appliance to an empty station or area
- Risk Information: Attaching/informing crews attending incidents of any additional risk information collated in the fire control systems that is relevant to the incident
- Carry out a dynamic risk assessment of each call. This should take into account:
    - Any requirement to re-deploy resources from one incident to another
    - Validation of resource proposals
    - Passing of any relevant information to crews attending the incident
    - Considering the need for any fire cover moves
    - Re-evaluating initial risk assessment and updating emergency responders as necessary

Control measure – Use Automatic Vehicle Location System (AVLS)

Control measure knowledge

The Automatic Vehicle Location System (AVLS) provides the exact location of individual fire and rescue service vehicles. This enables the mobilising system to propose the nearest available resource that is appropriate to dispatch to an emergency. AVLS will improve efficiency, as the mobilising system will know the exact location of resources without human intervention. It will also strengthen the 'speed and accuracy' dimension of resilience by enabling the fastest appropriate resources to be identified instantaneously. The system uses a road network layer to calculate the resource – calculations will take resource type capabilities or restrictions into account, will account for any current road conditions and distinguish whether congestion is caused by the incident or not.

See DCLG Future Control Room Services Scheme

Strategic actions

Fire and rescue services should:

- Have suitable procedures in place to support the mobilisation of the nearest appropriate resources

Tactical actions

Fire control room operators should:

- Retrieve and mobilise the relevant resources using service systems and procedures

Control measure – Use Next Generation Text (NGT) service

Control measure knowledge

The Next Generation Text (NGT) service, previously Text Relay/Text Direct is used by customers who are deaf, hard of hearing, deaf-blind, or speech-impaired and use a text phone to make or receive telephone calls. The call handling agency provides a unique code for Text Relay customers to make emergency calls. Customers who cannot use voice-based systems will use a text phone to make and receive telephone calls. A text phone can be thought of as a standard telephone but with the handset replaced by a keyboard and display.

Two text phones can communicate over a standard telephone call. The characters that are typed on the keyboard of one text phone are transmitted to the other text phone as tones in real-time – each character is sent as it is typed and the user does not have to press Enter to send the text. If one party does not have a text phone the call has to be made by the Text Relay service.

Text Relay is a network based service that BT/CHA provides to customers who need to use text phones. Any customer making a text phone call, or wishing to communicate with a text phone user, will use Text Relay. No registration is required. The call will be answered by a 999 emergency adviser who will be joined at the same time by a Text Relay Assistant. The Relay Assistant will translate the conversation by reading the typed text from the text phone user to the voice user and typing their spoken reply.

The BT/CHA 999 Adviser will announce to the emergency services that the call is from a text user. It is possible to receive such calls from mobile phones but in these circumstances the customer will be connected in voice.

If the call is made from a BT/CHA customer, name and address details will be provided. However, this may not be the case for customers of other call providers.

If for any reason the Text Relay service is extremely busy a call may arrive with the BT /CHA 999 Adviser without the Text Relay Assistant in conference.

(PECS Code of Practice, Draft 4, March 2014)

Strategic actions

Fire and rescue services should:

- Have equipment and procedures in place to allow them to receive calls via text phone or the text relay service

Tactical actions

Fire control room operators should:

- Receive and process calls via text phone or the text relay service according to service procedures

Control measure – Use an interpreter call handling agency

Control measure knowledge

A wide variety of languages are used by both residents and visitors to the UK. Where a caller in a stressful situation and English is not their native language the ability to quickly gather information can be impaired.

A number of agencies who offer rapid access to interpreting services are available, covering a wide range of languages.

Strategic actions

Fire and rescue services should:

- Have arrangements in place to allow control room operators to handle calls for assistance from members of the public who are unable to communicate in English
- Develop procedures to ensure fire control room operators can quickly establish if interpretation services are needed. The control room operator should be able to identify the language required

Tactical actions

Fire control room operators should:

- Identify which foreign language requires interpretation and apply service procedures to gather information from the caller

Control measure – Record call details

Control measure knowledge

All call handling details should be recorded by fire control room operators so that an accurate account has been logged for any queries or future references.

Strategic actions

Fire and rescue services should:

- Develop procedures and systems to allow fire control room operators to record information so that it can be stored and, if necessary, retrieved quickly

Tactical actions

Fire control room operators should:

- Store and retrieve recorded call information following service procedures

Control measure – Use the communications or mobilising system recording facility

Control measure knowledge

Instant playback recording

Communication or mobilising systems can record information when a control room operator either transmits over the radio channel or answers a telephone call. This automatically de-selects once the action has ceased.

Archive recording

This is multi-channel continuous recording archive system. It usually stands alone, with sufficient storage for all voice traffic to and from each control room operator's position, both on radio infrastructure and telephones designated to the control room, which are clearly identified.

The recorder will also define searches based on:

- The date and time
- Operator position
- Length of call
- Incident number

This system allows fire control room operators to extract a specific recording and transfer it to a removable media device or an electronic format. It also allows the analysis of call data for pre-format reports, call assessment and verification, and can also be accessed from more than one place.

Strategic actions

Fire and rescue services should:

- Consider providing instant recording facilities. Where provided these should offer simple and effective instant playback to the control room operator.
- Where automatic recoding facilities are provided, develop a policy for the use and storage of these recordings. In developing this policy, they should refer to current legislation such as the Data Protection Act.

Control measure – Use the mobilising system premises based gazetteer

Control measure knowledge

A premises-based gazetteer is a database containing up-to-date address details for the vast majority of premises, along with other information such as data relating to motorways, streets, towns, villages, and other points of interest. The database can:

- Improve the accuracy of an emergency response by enabling exact address information to be relayed to firefighters and officers at the time of mobilising
- Allow a wide range of valuable information to be held alongside address details and points of interest (e.g. address- specific risks, plans, key holder details and road closures), all of which can be included in system-generated mobilising messages
- Help reduce the risks faced by firefighters attending incidents, by providing them with information on the dangers they are likely to encounter at specific locations
- Help reduce the risk of communication errors by providing a set of common address information for fire control room operators to use when working in partnership with, or providing assistance to, another fire and rescue service, or when communicating with resources attending emergencies
- Improve the ability of fire and rescue services to work together and with other emergency services by providing a common set of address information

A premises-based gazetteer can improve operational efficiency and contribute to strengthening the 'speed and accuracy' dimension of resilience significantly, by increasing mobilising accuracy.

See DCLG, Future Control Room Services Scheme

Strategic actions

Fire and rescue services should:

- Consider adopting a standard premises-based gazetteer. In selecting the gazetteer, they should bear in mind the need for this to be kept up to date. This can be achieved by adopting a gazetteer that is maintained by a third party, such as Address Base.
- Consider attaching special risk information to relevant incident locations contained in the premises-based gazetteer

Tactical actions

Fire control room operators should:

- Implement action plans or special procedures for addresses (e.g. COMAH). Crews will be able to access this information via mobile data terminals once all details have been recorded and mobilisation performed.

Control measure – Use incident typing

Control measure knowledge

Incident typing is a process for selecting a class or category for all the different incidents a fire and rescue service may be expected to attend. Incident types can be inputted to the mobilising system, assisting with an effective and efficient emergency call handling process.

The incident type may be based on a hierarchical structure that can have multiple levels or subsets. This system offers a list of mobilising incident reference types and guidance on specific descriptors.

When an incident type is recorded it allows the control room operator to run a search based on key words entered for the type during a call. This can provide a structure to begin gathering the relevant information that will be necessary to respond. This information will assist in building an accurate picture of the incident, and when constructed to offer operators proactive operational responses such as pre-determined attendances and action plans, the outcome would be consistent and sound decision making when deploying resources to emergency calls.

See CFOA National Incident Type List

Strategic actions

Fire and rescue services should:

- Consider developing or adopting a clearly defined methodology for recording the types of incident that may require their response

Tactical actions

Fire control room operators should:

- Mobilise appropriate resources based on incident type and consider national resilience assets

Control measure – Prompt call information

Control measure knowledge

Emergency call management (ECM) is based on a set of generic emergency call prompts. These will build on the knowledge and skill of fire control room operators enabling them to assess incidents and elicit specific information appropriate to the type of calls, which will assist with mobilising. This may also improve the safety of firefighters and the public, as the fire and rescue service begins to assess and manage risk during the management of an emergency call.

The ECM protocol in brief, offers a generic system for the successful management of emergency calls based on the principle that an emergency call can be dealt with in three distinct stages:

- Stage One: primary questions, which aid the mobilising decision
- Stage Two: assessment questions that help build a picture of the incident, aid mobilising decisions, and assist the safety of responders and the caller
- Stage Three: pre-arrival advice designed to assist the safety of the caller and the public at the scene

ECM provides a framework for managing an immediate and developing risk against a set of generic incident types, by evaluating the nature of the call and determining the appropriate resources required.

Fire control room operators will normally use call prompts when dealing with calls from members of the public, though it is recognised that on occasions more than one generic emergency call prompt may be needed.

The perception of risk may vary between individuals and groups; it is influenced by attitudes, personal experiences and knowledge. When risk based decisions are made, it is important to take account of known or acquired information and professional judgement within the framework of fire and rescue service policy, standards and guidance.

Fire and rescue services have a statutory duty to respond to emergencies other than fires. It is important that fire control room operators have the right training and guidance for their role in the ECM process. Further guidance has also been gleaned from past incidents – although this has been invaluable to fire control room operators there is a need to expand the questioning to reflect current incident types.

Strategic actions

Fire and rescue services should:

- Consider adopting methods of prompting fire control room operators with standardised information to assist them in identifying the information they need to mobilise the correct resources

Tactical actions

Fire control room operators should:

- Follow service procedures for obtaining information from callers
- Recognise occasions when more than one generic emergency call prompt may be needed

Control measure – Hold contact information for Category 1 and 2 responders

Control measure knowledge

Emergency responders will, on occasions, need to request the attendance at operational incidents of other agencies to support the safe resolution of the incident. For these requests to be actioned control rooms should be able to access the contact details of other responders in a timely and accurate way. Fire and rescue services should consider retaining contact information for a range of Category 1 and 2 responders and other partner agencies who may be able to respond and assist. Maintaining the accuracy of this information is essential to ensuring a prompt response. Responders and partner agencies may include:

- Local authority and government departments
- Utility networks
- Animal welfare organisations

Strategic actions

Fire and rescue services should:

- Ensure fire control operators have access to the contact details of other category 1 and 2 responders and relevant partner agencies

Tactical actions

Fire control room operators should:

- Request assistance from Category 1 and 2 responders and other relevant partner agencies when required

Hazard – Loss of, or failure to correctly store accurate incident data

Hazard	Control measures
Loss of, or failure to correctly store accurate incident data	Use the mobilising and communication system Follow the standard message process

Hazard knowledge:

Completing incident data logs is 'core business' for fire and rescue service control rooms. The incident log is the means for recording or capturing all information specific to an emergency. It must accurately reflect all activities related to that incident. The information collected will consist of:

- The initial call or calls
- Emergency call handling process
- Mobilising resources and assets
- The information flow to and from the incident ground

The information contained in the log is a chronological record of any incident and will continue to be accessed or referenced long after an incident has been closed. The information may be used for a number of reasons:

- Organisational learning and development whether from a strategic, tactical or operational viewpoint
- Post-incident investigations – fire related, accidents or criminality, for example
- Sharing with other emergency responders or agencies

The communication and mobilising systems set up by fire and rescue service control rooms can be used for incident data and logging. The log endorsements are the responsibility of the fire control room operators and there should be regular reviews to ensure their accuracy, quality and consistency in accordance with relevant legislation, guidance and protocols.

See: Recording Information

Data Protection Act 1998

Control measure – Use the mobilising and communication system

Control measure knowledge

The main function of the mobilising system is to aid the recording of call information and the despatch of the selected resources. Secondary functions include displaying alarm conditions for the system and the generation of statistical information.

On entry of an incident type and address the system will interrogate its database to match the address information. It may also search for risks, duplicate incidents, telephone kiosks, map references, historical data etc., so as to provide the operator with as much information as possible. When an address match is made the operator is presented with a pre-determined attendance from the address based gazetteer. The system makes recommendations, which can be overridden by the operator. The mobilising system also maintains a log for each incident, recording all times and actions associated with that incident. Other facilities are batch calls in spate conditions, malicious call log, operating and system alarms, training mode and all fire control room operators (CRO) call handling times and logging data information.

The mobilising system will also include an interface with station end equipment to enable turnout messages to be transmitted. These messages can be sent to resources in a number of ways, for example data messages sent to a computer located in a fire station or other location where resources may be based, even temporarily. The data links between the mobilising system and the station end equipment can be provided in a number of ways such as the wide area network and the public switched telephone network. It is usual to employ multiple bearers for resilience.

The use of common coding and interface protocols can allow for systems to be integrated with data bases and hardware. This can help to minimise handling of information and ensure a resilient communication system.

Strategic actions

Fire and rescue services should:

- Ensure they have a mobilising and communication system in place which allows for:
    - Automatic recording of key communications
    - Recording information relevant to the operational incident
    - Time and date stamping of critical information
    - Interrogation and reporting of mobilising information
    - Mobilising and communicating with fire and rescue service resources
- Ensure that mobilising and communication systems are capable of integration to allow for resilience in communications.

Control measure – Follow the standard message process

Control measure knowledge

The fire and rescue service uses standard message templates to ensure communications between control rooms and the incident ground are brief. Employing a suite of standard messages will also lead to consistent reporting of incident specific details, which are understood by all and which will assist fire control room operators in recording such data accurately.

Advances in technology mean that resource radios may no longer be the primary means of transmitting such information. Mobile data terminals linked to mobilising systems can send all status messages in text formats, but it should be borne in mind that standard templates must still be used to reduce any confusion as to the type and nature of a message.

Such messages would be for fire sector incidents only. Any requirement to pass on or share information with multi-agency partners is addressed in the JESIP Interoperability Framework

See National Operational Guidance: Incident command

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Strategic actions

Fire and rescue services should:

- Have procedures in place for standardised message formats that are known to all personnel; bear in mind the need for interoperability
- Follow best practice and ensure that the call sign or incident commander's name should precede any message – this will enable the control room operator to accurately identify the log to be annotated with the details
- Additional messages will be passed from the incident ground to the control room; local policies and procedures will determine their structure and nature

Tactical actions

Fire control room operators should:

- Use best practice to ensure that standard messages to and from call signs are clear and concise in their content

Time of alert to time of attendance

Hazards and control measures that relate to the time between operational personnel receiving a mobilisation instruction and attending an incident.

Hazard - Impaired mental and physical ability caused by alert/notification to respond

Hazard	Control measures
Impaired mental and physical ability caused by alert/notification to respond	Monitor health and fatigue Maintain individual situational awareness Wear safe clothing and footwear Provide a safe environment

Hazard knowledge

When a person receives notification to respond to an emergency incident they may experience a range of emotions and subsequent physical reactions. These reactions may impair their cognitive appraisal of the situation and so increase the likelihood of making errors of judgement. This temporary physical and mental impairment can increase the likelihood of accidents occurring.

HSG48 states that to evaluate the risks from the hazards it is important to decide if the risks vary due to human influences. For example, there is a higher likelihood of human error between 02:00 and 05:00 when physiology dictates that the human body should be asleep. The risks will also be influenced by how well trained people are, whether they have had sufficient rest before starting a shift, and whether they have taken alcohol or used drugs.

Control measure - Monitor health and fatigue

Control measure knowledge

Most firefighters work shift systems, including at night, and sometimes for extended hours. Such working patterns can lead to adverse effects on health. Reduced performance levels have been associated with shift working, which can also increase the likelihood of accidents and ill health.

Firefighters may experience severe fatigue, which may lead to impaired performance on tasks that require attention, decision-making or high levels of skill. For safety-critical work the effects of fatigue can give rise to increased risks.

Section 6 of the Management of Health and Safety at Work Regulations 1999 states that every employer shall ensure that his or her employees are provided with health surveillance appropriate to the risks to their health and safety identified by the assessment.

Strategic actions

Fire and rescue services should:

- Consider the impact of fatigue as per The Working Time Regulations (as amended)
- Ensure that fatigue associated with primary employment is considered in the case of retained duty staff and that arrangements are in place to monitor and manage fatigue and crew welfare during such incidents
- Ensure rest and recuperation periods follow protracted and arduous incidents
- Consider drug and alcohol testing

Tactical actions

Emergency responders should:

- Adhere to service policy and procedures in relation to health and fatigue

Control measure – Maintain individual situational awareness

Control measure knowledge

When firefighters are alerted to respond to an emergency incident, the information contained in the notification to respond may cause the firefighter to make a judgement about the urgency of the

incident. In some people this may cause a stress reaction that may affect their physical and mental ability to respond safely.

Firefighters should also be aware of the hazard that can be caused when the notification to respond distracts them from their current activity. This may occur during fire and rescue service activity but also during secondary employment, leisure or domestic activities.

Strategic actions

Fire and rescue services should:

- Ensure responders have appropriate information at the time of call where possible, so that they can make appropriate decisions about how they respond
- Ensure that responders understand how their physical and mental ability can be impaired by the transition from rest to response, so that they can take conscious action to respond safely
- Ensure responders are also made aware of team safety protocol; for example, the safe person individual responsibilities, "Maintaining situational awareness means: being vigilant for personal safety and the safety of team members, being observant and able to identify and react safely to new or unexpected hazards, particularly when working without supervision."

Tactical actions

Responding personnel should:

- See National Operational Guidance: Operations – Health Safety and Welfare – Follow safe person principles

Control measure – Wear safe clothing and footwear

Control measure knowledge

Section 7 of the Health and Safety at Work Act 1974 states that, "Employees must take reasonable care of their own and other people's health and safety." Fire and rescue services should have standards of dress policies in place, based on the requirements of local risk assessments.

Some personnel may be required to be available for fire and rescue emergencies whilst performing other work. Suitable arrangements should be made to ensure the safety of personnel when in transition from one role or activity to another.

Strategic actions

Fire and rescue services should:

- Develop policy and guidance on wearing appropriate and safe clothing and footwear

Tactical actions

Emergency responders should:

- Wear footwear that is safe and appropriate for responding in the prevailing weather conditions

- Wear clothing appropriate to personal protective equipment as identified by service risk assessment

Control measure – Provide a safe environment

Control measure knowledge

Fire and rescue service premises must provide a safe working environment taking into account the effect employees and other people who may be on the premises of responding to emergencies.

See Workplace (Health, Safety and Welfare) Regulations 1992

Strategic actions

Fire and rescue services should:

- Consider a phased increase in sound volumes and levels of illumination in station alert/turnout systems
- Make personnel aware of the possible impact of impaired cognitive appraisal
- Provide a safe building and working environment
- Make provision for regular safety inspections of premises and working environments

Tactical actions

Responding personnel should:

- Immediately rectify or report safety issues relating to the workplace

Hazard - Road traffic collisions

Hazard	Control measures
Road traffic collisions	Encourage safe response drivers, passengers and road users Ensure safe vehicles

Hazard knowledge

Significant hazards can be presented by the movement of people and vehicles to emergency incidents. Fire and rescue service vehicles travelling to emergency incidents are exempt from certain statutory provisions under the Road Traffic Regulation Act 1984 (Section 87). This may present certain issues for arriving safely at the incident ground.

A number of factors may increase the likelihood of road traffic collisions, including:

- Alcohol
- Drugs
- Fatigue
- Stress

- Perception of urgency
- Peer pressure

In addition to these factors, drivers may need to take vehicles off the normal roadway, through restricted gaps, through floods, snow and ice to resolve or attend operational incidents.

Control measure: Encourage safe response drivers, passengers and road users

Control measure knowledge

Emergency responders en route to incidents must be fully equipped to deal with the various hazards they may encounter. Situations that they encounter may be related to the actions, inactions and reactions of other drivers when confronted with a responding emergency vehicle. Inexperienced or anxious drivers may cause a delay to the emergency response by adopting a poor road position with their vehicle. Inappropriate reactions by other road users could result in a collision and subsequent injury to members of the public and/or emergency responders.

The Health and Safety Executive document HSE Driving at work - Managing work-related road safety contains issues for people who drive at work. It suggests that managing work-related road safety effectively helps reduce risk, no matter what the size of the organisation. They also give examples where this type of road management policy may also result in:

- Fewer injuries to drivers
- A reduced risk of work-related ill health
- Reduced stress and improved morale

Drivers and passengers should be aware of their duty to comply with both the Highway Code and service policy. They should also be aware that while some exemptions exist for road traffic legislation these do not permit driving dangerously.

The choice of words and phrases used in mobilisation messages will influence behaviour from the receipt of a call in fire control to fire station turnout, during response and immediately on arrival.

See Fire and Rescue Authorities, Health, safety and welfare framework for the operational environment, Section 9.1

Strategic actions

Fire and rescue services must:

- Develop policy guidance and support arrangements for driving emergency response vehicles
- Ensure compliance with the Road Traffic Regulation Act 1984
- Regularly monitor their drivers' entitlement to drive (Section 87(2) Road Traffic Act 1988
- Ensure on call personnel are made aware of, and conform to legal requirements when responding to fire stations on receiving an emergency call
- Ensure that an appropriate driver training and maintenance of skills programme is in place, and that drivers satisfy medical requirements

Fire and rescue services should:

- Consider the impact of the information contained in the alert message and how it may affect the driver's perception of urgency (i.e. urgency of response appropriate to nature of call).
- Take account of the impact of fatigue and stress when assigning operational personnel to incidents particularly during spate conditions
- Consider the impact of the working/driving time regulations particularly with retained duty system personnel who may drive commercial vehicles in their main employment contract
- Ensure appropriate arrangements and control measures are in place to identify and control the hazards associated with lone working en route to incidents. This may apply to officers responding in cars in particular (See Working alone - Health and safety guidance on the risks of lone working)
- Ensure that all personnel are aware of the dangers of multi-tasking and its contribution to road accidents (Highway Code General Advice Para 148-150 - Driver Distraction)
- Consider working with partner agencies to provide information to members of the public on the correct actions to take when encountering responding emergency vehicles

Tactical actions

Fire control room operators should:

- Consider how words and phrases used in mobilisation messages might influence the behaviour of responding personnel
- Ensure that relevant information and any changes at the incident that may influence the urgency of their attendance or choice of access route is communicated to attending personnel whilst en route

Incident commanders should:

- Take account of the impact of fatigue and stress when assigning operational personnel to incidents particularly during spate conditions.

Emergency responders should:

- Ensure that vehicles are driven in accordance with service policy and procedure
- Immediately report all road traffic collisions in accordance with service policy

Control measure – Ensure safe vehicles

Control measure knowledge

The safe person principle establishes the foundation for effective health, safety and welfare management in the operational environment. It requires fire and rescue authorities to plan for and implement suitable arrangements for providing, maintaining and the response of suitable appliances and the equipment necessary to deal with the range of operational incidents it will be called on to attend (The Road Vehicles (Construction and Use) Regulations 1986).

In its publication Providing and using work equipment safely - a brief guide, the Health and Safety Executive provides an outline of the requirements of the Provision and Use of Work Equipment Regulations 1998 (PUWER) (and equivalent devolved legislation) and describes what an employer

may need to do to protect employees in the workplace. See http://www.hse.gov.uk/pubns/indg291.pdf .

This approach to safety is further embellished by the *CFOA Transport Officers Group – Best Practice Manual for Vehicle Maintenance* and *the Fire Service HGV Inspection Manual*.

See the Road Vehicles (Construction and Use) Regulations 1986 and the Highway Code - Vehicle Maintenance, Safety and Security

Further guidance can be found at http://www.rsopa.com/roadsafety/info/ownvehicle.pdf

Strategic actions

Fire and rescue services should:

- Consider HSE - Driving at work - Managing work-related road safety
- Ensure personally owned vehicles used in connection with service conform to legal requirements. See the Road Vehicles (Construction and Use) Regulations 1986 and the Highway Code - Vehicle Maintenance, Safety and Security Further guidance can be found at http://www.rsopa.com/roadsafety/info/ownvehicle.pdf
- Ensure service vehicles conform to legal requirements including crew-cab/vehicle stowage safety (BSEN 1846)
- Ensure any retro-fitting of equipment is subject to risk assessment consistent with the analysis contained in BSEN 1846 part 2
- Consider the likely effect of driver distraction from 'in vehicle' technology such as mobile phones, crew cab lighting systems, radios, computers and satellite navigation systems. See ROSPA Driving Distraction

Tactical actions

Emergency responders should:

- Ensure personally owned vehicles used in connection with service conform to legal requirements
- Comply with service procedures regarding vehicle checks and use

Hazard - Mobilised resources failed or delayed attendance at incidents

Hazard	Control measures
Mobilised resources failed or delayed attendance at incidents	Ensure reliable and efficient transport and communication arrangements

Hazard knowledge

The delay or response failure of fire and rescue service vehicles may result in an inappropriate balance of resources being available at the incident. This could lead to unsafe working practices as crews are faced with pressure to act. Efficient arrangements should be in place to ensure that fire

control identify and mobilise the correct resources for the incident type and location. See Emergency Fire Control Operations.

Control measure – Ensure reliable and efficient transport and communication arrangements

Control measure knowledge

Fire control operations should make appropriate decisions on the resources to mobilise. However, these resources may fail to attend an incident or may be delayed in their response. In all cases of failed or delayed attendance, services should have arrangements in place to ensure that fire control is promptly informed so that appropriate actions can be taken.

Common reasons for failed/delayed attendance are:

- Personnel failing to respond or not responding promptly
- Vehicle breakdown
- Road traffic collision en-route (see Road traffic collisions above)
- Unable to locate incident
- Severe weather conditions impeding response

For further information, see control measures (listed in Road traffic collisions above)

Strategic actions

Fire and rescue services should:

- Have reliable arrangements in place to ensure that responding personnel receive the alert/notification to respond
- Provide reliable vehicles (see The CFOA Transport Officers Group Best Practice Manual for Vehicle Maintenance and the Fire Service HGV Inspection Manual)
- Ensure fire control operations personnel make use of geographical information systems (GIS) and automatic vehicle location systems (AVLS) to assist in identifying incident locations and directing resources. See Emergency Fire Control Operations
- Ensure operational personnel are familiar with the risks and road networks in their area
- Have efficient and reliable communications arrangements in place to ensure that fire control operations personnel are promptly notified of any failed attendance or delayed response

Tactical actions

Appliance commanders should:

- Confirm the location of the incident and respond using pre-planned routes and/or GIS mapping systems
- Report any event that may lead to a failed or delayed response

Hazard - Incident related hazards en route to and on attendance at the incident

Hazard	Control measures
Incident related hazards en route to and on attendance at the incident.	Use local knowledge Use effective navigation Make a safe and controlled approach to the incident Gain access /entry

Hazard knowledge

The direct and indirect hazards associated with an incident may extend beyond the immediate incident ground. Examples include the build-up of traffic, onlookers, press, people trying to evacuate, gas clouds, chemical contamination or radiation. At certain incident types an emergency service attendance can cause an additional hazard to those agencies already in attendance. It may be necessary to proceed to the incident without the use of blue lights and audible warning devices. This directly relates to the quality of the information passed as part of the mobilisation process.

Control measure – Use local knowledge

Control measure knowledge

Technology aside, comprehensive knowledge of a station's local area can significantly contribute to successful and efficient incident outcomes. Fire and rescue service personnel should endeavour to learn as much as possible about major hazards in the area so they are aware of the risks they may face if they are called to attend an incident and any precautions they should take.

The ability to read maps/street atlases may be key to locating an incident. Appliance drivers should have a good understanding of local road networks and be able to anticipate the effect that the incident may have on approach routes. Other local factors may affect attendance times, for example:

- local events
- activities affecting the roads
- large numbers of members of the public may be congregated
- knowledge of road traffic pinch-points
- smoke from the incident obscuring driver's vision
- flooding making road impassable

In rural areas, firefighters should have an awareness of accessible farm tracks and the extent to which they can be used to reach isolated incidents. They should know the make-up of open land and

susceptible areas, including sites of special scientific interest and they should keep themselves posted, as far as possible, about changes in road conditions due to the weather.

Strategic actions

Fire and rescue services should:

- Provide effective means to enable personnel to gain the required skills, knowledge and understanding of their potential work area, for example, topography and map reading
- Provide effective means to update personnel of any activities or changes in their area, which negatively affect attendance times.
- Provide effective systems and processes to update personnel who are en route to an incident of any additional information which could affect their attendance

Tactical actions

Incident commanders should:

- Use local knowledge, topography and map reading skills to aid navigation to an incident
- Consider delegating responsibility for navigation to suitably qualified members of the team
- Confirm details of the incident with fire control rooms to assist in locating the incident
- Identify and communicate alternative routes to the incident where appropriate

Control measure – Use effective navigation

Control measure knowledge

Benefits of using maps

A map can enable accurate planning of a journey, giving a good idea of landmarks and features passed along the route, as well as the distance to be travelled. Maps can also be extremely useful tools that can be used at a range of fire and rescue incidents. For example, maps can provide important information to aid navigation, planning, decision-making and risk management on the incident ground.

Navigation aids

Navigation aids may include:

- Satellite navigation systems
- GPS devices
- Other online mapping systems, such as Google Maps

Interoperability and major or civil emergencies

The Civil Contingencies Secretariat in the Cabinet Office, working in partnership with Ministry of Defence and Ordnance Survey, has created a set of common map symbols to promote interoperability between emergency responders.

Mapping for Emergencies is a free service provided to the emergency services whenever there is a threat to or loss of life. Paper mapping or geographic information can be supplied to assist in responding to a major or civil emergency.

Ordnance Survey information

The Ordnance Survey website provides information, in written and video formats, on how to read maps and use a compass.

Their guide, Map reading from the beginner to the advanced map reader, contains topics including:

- Map symbols and scales
- Grid references and National Grid lines
- Reading contours and relief
- Using a compass
- Navigating at night or in bad weather

Grid references

The Ordnance Survey provides information about using four-figure references (a single kilometre square on an Ordnance Survey map) and six-figure references (a 100 metre square in a single kilometre square on an Ordnance Survey map).

However, fire and rescue services may also use:

- 10-figure references: A one-metre square, commonly used in GPS devices
- 12-figure references: A one-metre square, commonly used in mobile data terminals (MDTs). The two letter prefix for the 100 kilometre square, as shown on the National Grid, is converted into numeric format.

Strategic actions

Fire and rescue services should:

- Ensure that if they use multiple grid reference formats, their personnel know how to convert between the different types of grid reference
- Ensure that personnel do not totally rely on satellite navigation systems; knowledge of the topography of the area cannot be underestimated as an important tool in achieving a speedy and timely arrival at an incident
- Record and be able to provide up-to-date information to operational personnel about local features that may cause delays when navigating to an incident. For example:
    - Level crossings
    - Toll or swing bridges
    - Tunnels
    - Ferries and their sailing times

- Maintain contact details for railway officials, bridge authorities, ferry companies, etc.

Tactical actions

Incident commanders should:

- Use local knowledge, topography and map reading skills to aid navigation to an incident
- Use all available navigation aids when locating and responding to rural or remote incidents
- Contact rail, bridge, ferry or other operators if their services and activities will affect response times

Control measure – Make a safe and controlled approach to the incident

Control measure knowledge

To make safe decisions about the speed, the route and the location to attend, drivers should be provided with accurate and timely information about the incident. Any safety concerns experienced (traffic conditions/blocked roads etc.) by attending appliances and crews should be communicated to fire control so that further attending resources are able to make a safe approach.

Incident commanders should consider the safe route for attending appliances and the availability of holding areas. This information should be communicated to fire control so that attending resources are able to make a safe approach. The potential for incident spread or a change of wind direction should be taken into account when identifying suitable holding areas and approach routes.

Strategic actions

Fire and rescue services should:

- Ensure appropriate mobilising. Consider dynamic mobilising to make sure that no resources are mobilised unnecessarily. See: Failure to handle emergency calls and mobilise resources in a timely manner
- Ensure appropriate arrangements are in place to ensure that personnel are provided with relevant and accurate information about the type of incident they are attending so they can make an accurate appraisal of the hazards en-route to and on attendance at the incident
- Have effective arrangements in place to allow all appliances and vehicles to be positioned on the incident ground in a way that optimises their safe use and minimises risk. These measures include protection and visibility on roadways

Tactical actions

Fire control operators should:

- Communicate access, rendezvous points (RVPs) and marshalling areas to responding appliances

Appliance commanders should:

- Make a dynamic risk assessment of the incident development when positioning appliances
- Inform fire control of any issues relating to access, rendezvous points and marshalling areas

Control measure – Gain access/entry

Control measure knowledge

Fire and rescue services are afforded the power to enter premises or a place, by force if necessary, or break into a vehicle without the consent of its owner or occupier. These actions are authorised where a fire has broken out, a road traffic collision or an emergency of another kind has occurred.

Gaining access or entry by force will invariably result in some degree of damage to property; to limit damage, personnel should consider different types of forcible entry methods. Fire and rescue services use many different types of forcible entry tools, ranging from basic cutting, prying and striking tools to sophisticated mechanical and hydraulic equipment.

A key factor for incident commanders to consider when undertaking forcible entry to any premises or site is the need to secure the premises after operations have ended. Although the security of premises is not the legal responsibility of the fire and rescue service, the incident commander should take all reasonably practicable steps to ensure that the site is left in a safe condition. Before making an entry to any premises, crews should be mindful of noting any points that may indicate evidence of criminal activity.

For further information, see: Fire and Rescues Services Act 2004 (or equivalent devolved legislation)

Strategic actions

Fire and rescue services should:

- Provide crews with training to enable the gaining of access and entry to premises or places with minimal damage

Tactical actions

Incident commanders should:

- Consider employing techniques to gain access to premises that cause minimal damage having regard for the urgency of the situation

Risk information gathering

Hazards and control measures associated with the collection, storage and accessing of operational risk information.

Hazard – Failure to identify foreseeable risk

Hazard	Control measures
Failure to identify foreseeable risk	Fulfil legislative responsibilities Produce a risk management plan Produce Site-Specific Risk Information Produce emergency response plans

	Consider national guidance

Hazard knowledge

Fire and rescue authorities have a responsibility for the health, safety and welfare of their employees. This runs parallel to their responsibility to reduce the risk from fire (and other emergencies) to the community they serve, and the environment in which they operate.

As part of these responsibilities, the fire and rescue authority must have appropriate policies and procedures in place to address any issues in achieving these objectives and provide the appropriate knowledge, skills and understanding through training and development, to enable its employees to operate safely.

Current UK legislation states that a fire and rescue authority must make provisions for:

- Extinguishing fires in its area
- Protecting life and property at fires in its area
- Rescuing and protecting people at a road traffic collision
- Rescuing and protecting people in emergencies

This legislation places a responsibility on the fire and rescue authority to make arrangements for obtaining the information needed for that purpose.

In support of these legislative responsibilities, the various fire and rescue national frameworks require fire and rescue authorities to have effective arrangements for gathering risk information and making it readily available to operational crews. These arrangements should include an effective audit and review system to ensure that the information is current. Identifying and managing risk whether through pre-planning and managing emergencies, fire safety, crime and disorder initiatives, training or undertaking other day-to-day activities is part of the integrated risk management planning process.

Fire and rescue services already capture data and information to support the core functions of their organisations, such as:

- Operations
- Fire safety
- Emergency planning
- Fire investigations
- Health and safety
- Post-incident learning

The extent of the data collected and held and the policies and processes related to the use, storage and sharing of this data and information vary across fire and rescue services. However, data and information may be stored in isolation and the consequential data integration issues may affect efficient operational pre-planning and incident management.

Most operational risks are foreseeable. However, the risks posed by events such as adverse weather conditions or civil contingencies are not easily quantifiable. A combination of operational risk information with available generic risk assessments, local knowledge and professional judgement will help ensure appropriate risk management processes can be put in place.

An operational risk information management system should:

- Bring together outputs from existing and established systems
- Develop and support a common approach to the strategic and dynamic analysis of risk
- Determine the appropriate application of resources and processes to address the risks that affect the firefighter, other emergency responders, members of the public, the environment and so on

The Fire and Rescue Service Operational Guidance – (Operational Risk Information March 2012; Section 3) report into providing mobile data examined the information requirements for the roles that support incident ground operations. This study identified that providing accurate, relevant and timely operational information was critical to all personnel. These three elements are reflected in the data information triangle shown in Figure 1. The study also highlighted that providing too much information could put the recipient into 'information overload' and this situation may be as serious as not providing enough information. See National Operational Guidance: Incident command – resilience and pressure management.

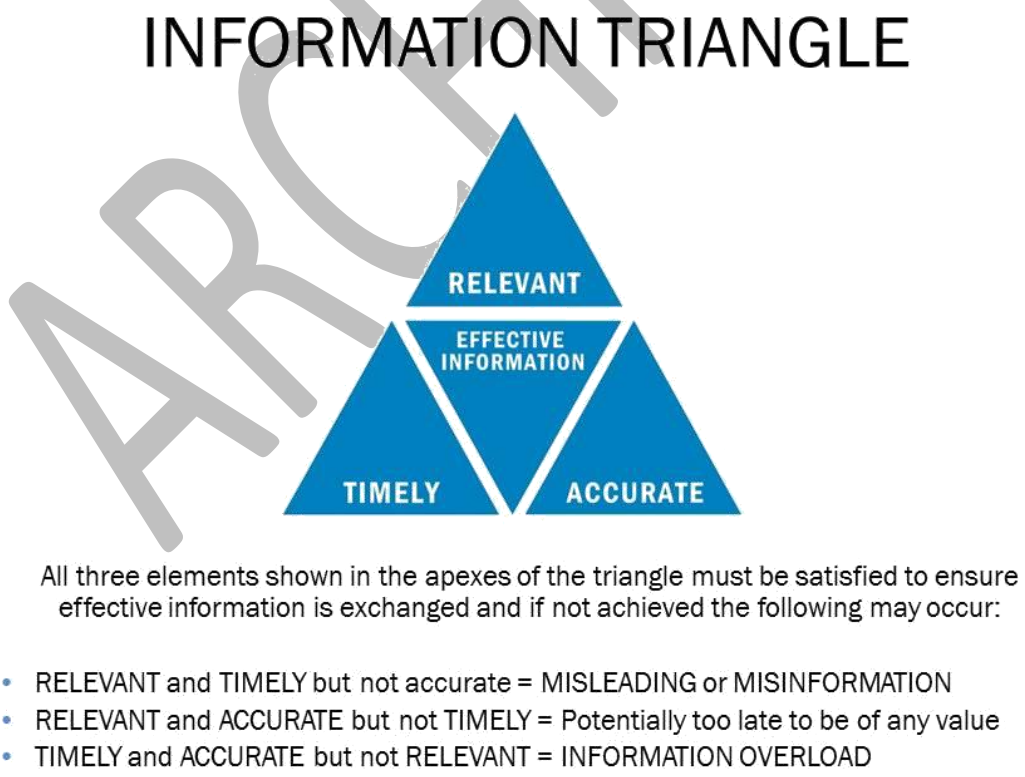

Figure 1: Information triangle

Control measure – Fulfil legislative responsibilities

Control measure knowledge

Fire and rescue services need to understand their statutory duties and responsibilities relating to operational information. They should adopt a common methodology and approach to managing the identification, gathering, analysis, provision, audit and review of operational data.

This responsibility is specifically identified in a number of different elements of legislation (UK Fire and Rescue Service legislation, and the Management of Health and Safety at Work Regulations). A range of other legislation also places responsibilities on fire and rescue authorities regarding collecting, using, storing and sharing data.

Strategic actions

Fire and rescue services should:

- Ensure there are clearly defined strategic responsibilities for the development of policies and procedures
- Manage operational risk information as part of an integrated approach to managing risk and ensuring safe systems of work for all employees
- Take into account relevant legislation and available guidance and information when planning and undertaking risk management activities – the breadth of legislation that may affect the gathering, storing and use of operational risk information is wide-ranging and further guidance is published by Government or other agencies

Control measure - Produce a risk management plan

Control measure knowledge

In accordance with the relevant fire and rescue service national frameworks, each fire and rescue authority must produce a risk management plan that identifies and assesses all foreseeable fire and rescue related risks that could affect its community, including those of a cross-border, multi-authority or national nature. The plan must consider the community risk registers (CRR) produced by local emergency planning groups and any other local risk analyses as appropriate.

The government monitors the risks that the United Kingdom could face through the National Risk Assessment process, which is led by the Cabinet Office, and through other relevant risk assessment and horizon-scanning processes. The government provides guidance to local emergency planning forums on how to interpret the likelihood and impact of these risks for their local area. This guidance informs the local resilience forums in producing community risk registers, ensuring there is a fully integrated risk assessment process between the government and all local responders, including fire and rescue authorities.

The government will also define the consequences of those risks included in the National Risk Assessment and set a benchmark of the generic capability needed to ensure the United Kingdom can both respond to and recover from a range of potential emergencies. The government does this through the National Resilience Planning Assumptions, led by the Cabinet Office.

Strategic actions

Fire and rescue authorities should:

- Consider national guidance when producing risk management plans
- Consider community risk registers and any other local risk analyses to ensure that all foreseeable fire and rescue related risks are identified and included in their risk management plan
- Refer to the National Risk Register, the National Risk Assessment and the National Resilience Planning Assumptions when producing integrated risk management plans

Control measure – Produce Site-Specific Risk Information (SSRI)

Control measure knowledge

Fire and rescue authorities must make arrangements to obtain necessary information for the purposes of:

- Extinguishing fires and protecting lives and properties from fires in its area (relevant fire and rescue service legislation for England, Scotland, Wales and Northern Ireland)
- Rescuing and protecting people from harm at road traffic collisions in its area (relevant fire and rescue service legislation for England, Scotland, Wales and Northern Ireland)
- Dealing with any other emergency function other than fires and road traffic collisions in its area (relevant fire and rescue service legislation for England, Scotland, Wales and Northern Ireland)

Strategic actions

Fire and rescue services should:

- Develop criteria for the identification of sites requiring Site Specific Risk Information
- Support the generic information identified for foreseeable risks, which may include a programme to produce Site-Specific Risk Information – the following steps should be taken in achieving this:
    - Identify local sites and their risks
    - Gain local specialist advice from partner agencies and other organisations
    - Consider including salvage and/or disaster plans
    - Ensure that familiarisation visits and exercises involving such premises or sites are carried out
    - Produce suitable templates to record and capture the relevant information
    - Establish a delivery method to present the information in a clear and timely manner
    - Schedule reviews and audits for the validity and accuracy of such information
    - Embed a quality assurance programme
    - Ensure information is made available to operational personnel to help successfully plan for and resolve operational incidents

- Identify specific operational knowledge, skills and understanding, which may need to be incorporated into local training plans

Tactical actions

Emergency responders should:

- Ensure inaccurate information is identified and resolved and information systems are updated following the closure of an incident or following an inspection/site visit

Control measure – Produce emergency response plans

Control measure knowledge

The Civil Contingencies Act (CCA) places a responsibility on Category 1 responders to produce and have in place emergency plans, which may include procedures for determining whether an emergency has occurred.

There is a generic national framework for managing emergency response and recovery, irrespective of the size, nature and cause of an emergency. It also identifies the various tiers of single and multi-agency management, defining the relationship between them and a common framework within which individual agencies can develop their own plans and procedures.

For further information see Emergency Response and Recovery Guidance (England and Wales), Responding to Emergencies in Scotland and Emergency Planning, Northern Ireland Fire and Rescue Service

Strategic actions

Fire and rescue services should:

- Consider the roles and responsibilities of the fire and rescue service at emergency incidents when developing emergency plans
- Ensure that emergency plans are produced. Plans should be developed in consideration of the following:
  - Anticipation – horizon scanning for risks and potential emergencies
  - Preparedness – a clear understanding of roles and responsibilities and how they fit into the wider, multi-agency picture
  - Subsidiarity – managing operations and making decisions at the lowest appropriate level
  - Direction – establishing a clear and unambiguous strategic aim and objectives
  - Information – information management and appropriate preparatory measures being in place to build situational awareness and the development of a Common Recognised Information Picture (CRIP)
  - Integration – multi-agency involvement, roles and prominence
  - Co-operation – inclusive decision making processes, openness and mutual trust
  - Continuity – using established experience, expertise, resources and relationships to manage and respond to emergencies in the usual way

Control measure – Consider national guidance

Control measure knowledge

National guidance has been published by various bodies in the past ranging from 'Dear Chief Officer Letters' to Technical Bulletins. These publications do not impose a legal duty to adopt guidance, but they may be seen as best practice and a rationale for not following them would be necessary.

A partnership has been established between London Fire Brigade, the Chief Fire Officers' Association and the Local Government Association to develop national operational guidance that will, over time, supersede older guidance. This national operational guidance is designed to provide hazard and control statements that identify all hazards in a themed area and provide a suite of possible control measures and associated strategic and tactical actions.

The National Operational Guidance themes are grouped:

- 'All incident' including Operations, Incident command and Environmental protection
- Contexts are the operational environments in which any type of incident can occur, such as incidents on roads
- Tier one guidance is grouped by type, such as Performing rescues, Fires and firefighting and Hazardous Materials
- Each element of tier one guidance then has lower tier guidance such as Fires in the Built Environment
- Incident scenarios have been created for different types of incident. They contain the tactical information drawn from a number of pieces of guidance from across the National Operational Guidance framework aligned to the decision making model.

For the National Operational Guidance to be relevant to individual fire and rescue services, it is important that local risk levels are assessed and guidance compared with the local risk assessment.

Strategic actions

Fire and rescue services should:

- Identify the risks in their area and produce policies and procedures that take account of National Operational Guidance

Hazard - Failure to receive accurate, timely and relevant information

Hazard	Control measures
Failure to receive accurate, timely and relevant information	Make arrangements for emergency call management Adopt an information management methodology Use tactical advisers and responsible or competent persons

	Situational awareness Consider non-technical skills

Hazard knowledge

For the fire and rescue service, information is a critical resource in achieving successful operations. The availability of accurate, timely and relevant information is vital for managerial functions to be performed effectively, such as planning, mobilising, organising, leading and controlling.

- Availability of information is applicable to processes and procedures used to gain it and the means to provide relevant information to those who need it
- Accuracy of information is determined by measuring the information against actual events or occurrences
- Timeliness refers to the currency of the information when it is received
- Relevance concerns the situation or problem at hand. Relevant information is limited to that which can help solve a problem or contribute to a solution

Information management involves collecting and managing information from one or more sources and distributing the information to one or more audiences. This sometimes involves those who have a stake in, or a right to, that information.

Information sources and systems should support personnel's overall situational awareness of an event, which will inevitably present opportunities to have a significant effect on decision making. See Incident Command, Decision Control Process

In theory personnel always have some prior knowledge and understanding of events that are relevant to their decision making process. However additional or supporting information can and may modify their view of the event and potential outcomes, which may change a decision and the likely results. See Incident Command Decision Control Process

Control measure – Make arrangements for emergency call management

Control measure knowledge

Emergency Fire Control Operations provides detailed hazard and control information relating to receiving emergency calls, mobilising resources and maintaining the information flow between service control and the incident ground.

Strategic actions

Fire and rescue services should:

- Develop systems, processes and procedures for obtaining, recording and disseminating relevant information via emergency call handling, which may include:
    - Call prompts
    - Scripts
    - Action plans

- Templates
- Survival guidance

Tactical actions

Fire control operators should:

- Use agreed call prompts, scripts, action plans, templates and survival guidance necessary to provide additional information and ensure the safety of the public and emergency responders

Control measure – Adopt an information management methodology

Control measure knowledge

Information management is a discipline that governs accountability for the structure and design, storage and security, movement, quality, delivery and usage of information required for management and business intelligence purposes.

In an organisation, information management systems are like the central nervous system in the human body. They are the link that connects all the components together, enabling better operational decisions and responses to emergency incidents.

Information consists of data that has been processed, which is therefore meaningful to an end user. A system is a set of components that operate together to achieve a common purpose. An information management system collects, transmits, processes, and stores data. The system makes the conversion of data into management information for use by decision makers possible.

A management information system produces information that supports the management functions of an organisation (Davis & Olson, 1985; Lucas, 1990)

The Provision of Operational Risk Information System, as an example of good practice, seeks to provide a common approach to operational planning and management of risk and has been developed to assist fire and rescue services to:

- Meet their legislative responsibilities
- Maintain and where necessary improve their effectiveness and efficiency
- Manage the risk to their personnel
- Maintain interoperability with neighbouring fire and rescue services and other Category 1 and Category 2 responders
- Manage and reduce other risks in the communities that they serve

The Provision of Operational Risk Information System has been specifically designed to use existing data sets and supporting information, and is constructed to enable a flexible working framework where principles, rather than hard and fast rules, are used to underpin the methodology. It takes account of the need to identify and assess information, and its relevance to the operational pre-planning and management of risk to six risk groups.

See Fire and Rescue Service Operational guidance: Operational Risk Information

Strategic actions

Fire and rescue services should:

- Adopt a common methodology and approach to manage the identification, gathering, analysis, provision, audit and review of operational data, whilst allowing flexibility to integrate their respective processes in such a template.

Tactical actions

Incident commanders should:

- Validate the relevance of information
- Develop an information management structure to cater for the needs of the incident
- Share and update appropriate and relevant information with emergency responders using METHANE and the Joint Decision Model
- Ensure differences in information are resolved and databases are updated following the closure of an incident or following an inspection/site visit

Control measure – Use tactical advisers and responsible or competent persons

Control measure knowledge

Tactical advisers (Tac Ads) are individuals with an expertise in a particular area or topic. A tactical adviser has in-depth knowledge from both a business and organisational perspective that, when shared with others, can significantly enhance performance. They have responsibility to provide detailed, capability relevant advice to the incident commander at both tactical and/or operational levels. This advice can initially be in the form of remote advice only and this may progress to an attendance at incident at the affected fire and rescue service, if deemed appropriate. They should bring real-world examples, best practice and tricks of the trade that will have a positive effect on decision making. They should be the go-to resource who help resolve complex issues and has an understanding of their unique environment and work.

National Occupational Standards for tactical adviser roles detail the specific competency requirements for a number of capabilities. It may not be necessary for fire and rescue services to train personnel for all tactical adviser roles, however, arrangements should be in place to cater for the use of all relevant tactical advisers as part of the risk management planning process. National resilience tactical adviser roles are trained individuals who are placed on the national register of availability for mobilisation.

A responsible (or competent) person should have the appropriate level of knowledge and skills to be able to provide accurate and relevant information on their specific area of work. They should also be able to interpret and translate such understanding into information that would be useful to support operational priorities.

Using the accumulative knowledge of tactical advisers and responsible people will result in a continuous emphasis on quality information based on common understanding and underpinning knowledge of a situation.

Strategic actions

Fire and rescue services should:

- Ensure personnel are aware of the tactical adviser roles which may be used as a resource at operational incidents

Tactical actions

Incident commanders should:

- Liaise with tactical advisers (Tac Ads) and responsible or competent person at earliest opportunity, to enable the provision of accurate, timely and relevant information
- Identify and use additional information sources
- Consider using Met Office products, including FIREMET and/or CHEMET, which can help to determine the area of impact and how it may change with time during an incident

Control measure – Situational awareness

See National Operational Guidance: Incident command

Control measure – Consider non-technical skills

Control measure knowledge

See National Operational Guidance: Incident command – Consider operational competence

Hazard - Failure to access information

Hazard	Control measures
Failure to access information	Use information management systems Secure access Use non-technical skills

Hazard knowledge

When considering the storage of and access to risk information it is necessary to determine the appropriate information, level of detail and the processes to be applied to reduce the risks presented. Additionally, fire and rescue services should consider how to identify and produce such information in an appropriate format according to the levels of information required by incident commanders and responders to allow for suitable and sufficient decision making to be carried out.

Control measure – Use information management systems

Control measure knowledge

Information management systems are methods of storing, editing and distributing information. To ensure accurate, timely and relevant information these systems should be available at the point of use and should be easily accessible by those who need access to the information. These are not exclusively, but are increasingly, electronic in nature.

Vehicle-mounted data systems, such as mobile data terminals and printers offer advantages for the storage and availability of site-specific risk information on fire appliances

Some premises may be provided with emergency boxes either inside or adjacent to perimeter access points. These boxes are designed to contain emergency response information

Strategic actions

Fire and rescue services should:

- Develop appropriate information management systems for use in pre-planning, during operational incidents and post incident analysis
- Ensure information is presented in such a way as to ensure clarity and consistency and that does not overwhelm incident commanders, firefighters or other responders when carrying out their respective roles
- Ensure the system has the necessary protocols to protect secure information and it does not contravene any protective markings applied. At the same time, ensure that information is available to relevant users
- Consider the information requirements of incident commanders and those with other functional roles – it is essential not to cause information overload for the initial incident commander and to ensure that the information available supports the initial decision making processes and is accurate, timely and relevant. See Incident command guidance - Decision control process
- Consider the appropriate format for operational risk information – it should take into account the mechanisms for its distribution and availability, for example:
    - Vehicle-mounted data systems, such as mobile data terminals and printers offer advantages for the storage and availability of site-specific risk information on fire appliances
    - Some premises may be provided with emergency boxes either inside or adjacent to perimeter access points. These boxes are designed to contain emergency response information
- Identify where additional sources of information can be gathered for pre-planning, during operational incidents and post incident analysis
- Consider appropriate means to record relevant information

Tactical actions

Incident commanders should:

- Consider the use of recognised and agreed information management systems
- Consider the use of command support systems and equipment. See National Operational Guidance: Incident command)

Control measure – Secure access

Control measure knowledge

Security of information is a much wider subject than providing and using operational risk information. A range of legislation is relevant to gathering, disseminating, storing and protecting information. Fire and rescue services should ensure security policies, protocols, procedures and systems are in place for operational and other information.

Advice, guidance, policies and procedures will assist with information security, to reduce the vulnerability of the fire and rescue service to unauthorised access to hard copy and electronic data. There is also assistance concerning the protective marking of materials – national guidance has been published by the Cabinet Office and the following levels are identified in Her Majesty's Government (HMG's) Security Policy Framework:

- Official - includes routine business operations and services, some of which could have damaging consequences if lost, stolen or published in the media
- Secret – used where a compromise could seriously damage military capabilities, international relations or the investigation of serious organised crime
- Top Secret – used where a compromise could cause widespread loss of life or else threaten the security or economic wellbeing of the country or friendly nations

The majority of information that is created or processed by the public sector will fall into the official level. There is no requirement to mark routine OFFICIAL information. The method used to assess these principles within information systems is based on the impact the loss of this information may have on an organisation.

For further information see Government Security Classifications (April 2014).

Strategic actions

Fire and rescue services should:

- Ensure arrangements made for the security of operational risk information are consistent with the Protective Marking Framework
- Assess any site-specific risk information imported into a command and control system to identify its security (protective) marking – the information usually falls into groups or levels of importance depending on the level of risk identified
- Consider the need for site-specific risk information to be security assessed to ensure it is suitable for use via mobile data terminals
- Make suitable arrangements with site owners where copies of floor plans or other information is not available because of their security requirements. Agreements to provide the information required on arrival of the fire and rescue service at an incident may be appropriate. Operational crews responding to these sites should be made aware of these arrangements
- Ensure that identified personnel that have the necessary security checks to enable them to access information with the appropriate levels of security classification
- Ensure that they have a means of identifying service personnel and their credentials as and when required

Tactical actions

Emergency responders should:

- Understand that they are personally responsible for the secure handling of information that has been entrusted to them
- Be aware of the local organisational policy and processes regarding the security of information
- Have a method of personal identification when responding to emergency incidents

Control measure – Use non-technical skills

See National Operational Guidance: Incident command – Selection – Consider operational competence

Hazard - Failure to interpret information

Hazard	Control measures
Failure to interpret information	Use common terms and symbols Consider non-technical skills Clearly defined command roles and responsibilities, incorporating multi-agency arrangements

Hazard knowledge

The importance of a common approach is highlighted by the need to ensure operational risk information can be shared and understood across emergency services and between fire and rescue services. This is emphasised by increased integration of operational response, through intra and inter-operability arrangements. For further information see JESIP Joint Doctrine.

Information should be presented to ensure that the detail, level and content supports incident commanders, firefighters and emergency responders without overwhelming or overloading them. The information should be clear, concise and readily understood by all. This enables effective decision making when resolving incidents.

Control measure – Use common terms and symbols

Control measure knowledge

Without common terms and symbols there is a risk of misunderstanding between emergency responders and supporting organisations. At best this can lead to delays in obtaining support services and at worst people could be put at risk.

A common standard for terms and symbols is critical to effective interoperability between emergency responders and other supporting organisations, as well as intraoperability between fire and rescue services. Without a common approach and dialogue it would prove difficult to maintain

interoperability between the fire and rescue services, other emergency responders and supporting organisations. This includes technical aspects of communications.

Issues include:

- Words, terms, phrases, symbols or graphics with different meanings or context
- Words, phrases, symbols or graphics with no meaning in other organisations

Strategic actions

Fire and rescue services should:

- Make arrangements with other agencies and category 1 and 2 responders to develop a common understanding of terms and symbols
- Ensure that incident commanders are familiar with the responsibilities of other agencies and category 1 and 2 responders and the roles of their representatives that may attend operational incidents. (See JESIP)
- Review the guidance issued in relation to the Civil Contingencies Act, which has sought to provide some standardisation of common terms for interoperability, and the information contained in the Cabinet Office - Civil Protection Lexicon and Common Map Symbology

Tactical actions

All responding personnel should:

- Use common terms contained in the Cabinet Office Lexicon (See Civil Protection Lexicon)
- Use plain English to communicate information where a lack of common understanding exists

Control measure – Consider non-technical skills

See National Operational Guidance: Incident command

Control measure – Clearly defined command roles and responsibilities, incorporating multi-agency arrangements

See National Operational Guidance: Incident command

Hazard - Failure to transfer information

Hazard	Control measures
Failure to transfer information	Risk assessment at an incident Have a communication strategy Clearly defined command roles and responsibilities, incorporating multi-agency arrangements

Hazard knowledge

The transfer of information between single and multi-agency responders is key in ensuring a full appreciation of the situation and the circumstances specific to the incident or emergency.

A successful transfer of information will lead to a clear understanding of hazards and risks, operational tactics, control measures and procedures being employed.

Misinformation or a breakdown in communication can lead to unsafe systems of work, and unco-ordinated or ineffectual activities being implemented, thus resulting in a failure to achieve priorities and objectives. It can also lead to inefficient use of resources in the operational plan.

Detailed knowledge and guidance can be found in:

- The Foundation for Incident Command
- National Operational Guidance: Incident command
- The Joint Emergency Services Interoperability Principles (JESIP)

Control measure – Risk assessment at an incident

See National Operational Guidance: Incident command – Risk assessment at an incident

Control measure – Have a communication strategy

See National Operational Guidance: Incident command – Have a communication strategy

Control measure - Clearly defined command roles and responsibilities, incorporating multi-agency arrangements

See National Operational Guidance: Incident command – Clearly defined command roles and responsibilities, incorporating multi-agency arrangements

Hazard - Failure to review information

Hazard	Control measures
Failure to review information	Establish an assurance process Manage performance

Hazard knowledge

The commitment and leadership of the strategic management team is essential to the success of any management system. The service strategic operational risk management policy should set strategic direction, demonstrating how the duty for the provision of operational risk information is linked to the operational duties of firefighters and commanders. It should also describe how this information can be shared with other agencies and where this would be appropriate.

Managing operational risk information is part of an integrated approach to managing risk and ensuring safe systems of work for all employees. Policies should:

- Determine specific responsibility for operational risk information, with a defined role in terms of establishing, implementing and maintaining processes including audit and review, in line with the approach advocated by the HSE in Managing for health and safety (HSG 65).
- Determine and make available those resources required to implement, maintain and develop these processes
- Ensure there is clarity of responsibility between partner organisations, different functions in the fire and rescue service and the roles and responsibilities of managers
- Ensure clear documentation, document control and security procedures are in place
- Ensure that allocation of roles and responsibilities takes account of the competency, level of authority and capacity of individual employees
- Ensure all aspects of information management (relating to providing information for operational pre-planning, incident management and post-incident analysis) is subject to review
- Ensure continuing performance monitoring for relevant personnel, including assessments of their competency and use of the system and ensure any gaps in the effective management of the system are identified
- Ensure that there are effective communication and data sharing protocols in the organisation, and between the partner organisations involved in supplying and receiving operational risk information

Organisational planning should establish, implement and maintain procedures for hazard identification, risk assessment and determining the necessary controls. In the context of operational risk information, the hazard identification and risk assessment processes should take into account the:

- Range of possible activities related to firefighting, road traffic collisions and other emergencies
- Range of employees who may be involved in using operational risk information
- Capabilities, and likely behavioural responses, of those employees and other persons likely to be involved
- Incident command system and management procedures used
- Protective equipment, vehicles, rescue and firefighting equipment and any limitations of employees and their equipment

To judge the effectiveness of arrangements for providing and managing operational risk information, procedures should be in place to monitor performance on a regular basis. The procedures should:

- Provide qualitative and quantitative measures of performance at each stage, including post incident reviews
- Regularly monitor and report on the measures relating to performance of the plan

- Record and communicate the results of monitoring – providing information on how the system operates in practice, identifying areas where corrective action is required, providing a basis for continual improvement and providing feedback

Policies and procedures developed for managing operational risk information should be consistent and should comply with data protection and information system security

Control measure – Establish an assurance process

Control measure knowledge

Operational assurance deals with the effectiveness of fire and rescue service arrangements for implementing policies, procedures, guidance, hazard and risk assessments. Observation can enable fire and rescue services to maintain and improve their ability to manage such operational risks, by learning through audits, monitoring and performance reviews.

Auditing is specific in that it is a structured process for collecting information and data on the efficiency, effectiveness and reliability of operational information. Auditing should define the areas to be covered and the benchmarks against which the information will be measured.

The policy should include:

- Preventing injury and ill health of firefighters and other emergency responders
- Managing and mitigating risks in the community
- Continual improvement in providing accurate, relevant and timely operational information
- Complying with the legal duties of fire and rescue authorities in relation to operational risk information
- Complying with formal guidance and 'best practice' models
- Audit and review mechanisms

Strategic actions

Fire and rescue services should:

- Plan audits to determine whether the system has been properly implemented and maintained and is effective in meeting the organisation's policy and objectives. Periodic audit is a useful means to enable a deeper and more critical appraisal of the elements of the operational risk information system.
- Review the results of the audit to support continual improvement and to address weaknesses in the policy or organisation
- Consider independent third party audit and validation to ensure a robust review programme
- Design the assurance audit process to understand the responsibilities and risks faced by a fire and rescue service
- Assess the level of control exercised by management
- Identify, with management participation, opportunities for improvement

- Provide senior managers of the service with an understanding of the degree to which management has achieved its responsibilities and has put in place systems that reduce the risks associated with the operation of a fire and rescue service, including:
    - Reliability and integrity of operational information
    - Effectiveness and efficiency of operations
    - Safeguarding of assets and data
    - Compliance with laws, regulations and contracts

Control measure – Manage performance

Control measure knowledge

Measuring performance against pre-determined standards provides information on how effectively fire and rescue services are controlling risks, and provides feedback that influences organisational learning and the decision making process.

Strategic actions

Fire and rescue services should:

- Consider using performance indicators for qualitative and quantitative monitoring of organisational performance as part of an ongoing review process for the operational risk management system
- Ensure that those involved in undertaking the operational risk information processes are competent to:
    - Accurately identify hazards for firefighters, society, environment, community, heritage or other risk groups
    - Understand the range of risk management options available to reduce the risk
    - Understand their responsibility for the safety of others and the effect of their actions on the effectiveness of the safety system
    - Understand the legislative framework in which the fire and rescue service operates

And that they are:

- Capable of making professional judgements, taking account of the availability of information, the severity and likelihood of risk being assessed and the critical nature of the risk management options
- Appropriately motivated and encouraged to work in a safe manner
- Supported in addressing any competency gaps that are identified

Arrangements should also be made to review any circumstances where non-conformity is identified, either as a result of training, at incidents or through regular supervision of the arrangements. The reasons for nonconformity should be communicated so that lessons learned by one part of the organisation can benefit the entire organisation and feed the process of continuous improvement. It

is recommended that these findings are shared with other fire and rescue services and other emergency responders.

Hazard – Failure to record information

Hazard	Control measures
Failure to record information	Take legislative duties into account Use national incident recording systems (IRS) Use debrief management systems Use information management systems

Hazard knowledge

Policies and procedures should reflect that:

- All service activities are part of an integrated approach to managing risk, thereby ensuring safe systems of work for all employees
- All relevant information is recorded and available for those who legitimately need to access the information
- These policies and procedures are 'owned' at strategic management level

In developing the policy, the organisation should consider:

- Legislative duties, outlined in Emergency Fire Control Operations.
- Co-ordination with other core functions or policies, notably health and safety, integrated risk management, fire safety enforcement and civil resilience
- The needs of those working in the organisation and the hazards they face
- The historical and current performance of the organisation in providing operational risk information and the impact on health and safety and community safety
- The opportunities and needs for continual improvement
- The views of interested parties, including other emergency responders
- Confirming or establishing realistic and achievable objectives

Control measure – Take legislative duties into account

Control measure knowledge

Fire and rescue authorities should take into account the legal responsibilities placed on them, for example Fire and Rescue Services Act 2004, Data Protection Act 1998, and in particular the requirement that all relevant data held by the fire and rescue service should be available and should be used to reduce and manage operational risk, whether this be to firefighters, other service personnel or others for which the fire and rescue authority is responsible.

Strategic actions

Fire and rescue services should:

- Have in place an effective information technology strategy which focuses on the operational activities of pre-planning, incident management and post-incident analysis also taking into account legislative duties relating to:
    - Recording of information
    - Storing of Information (See Data Protection Act 1998, Government Security Policy Framework 2014)
    - Security of information (Government Security Policy Framework 2014)
    - Accessibility of information (See Data Protection Act 1998)
    - Sharing information
- Ensure that the information technology strategy forms part of integrated risk management plan
- Ensure there are processes are to be informed of changes in legislation, and subsequent communication strategies to inform relevant personnel

Control measure – Use national incident recording systems

Control measure knowledge

An incident recording system (IRS) is a system that enables data on all incidents attended by the fire and rescue service to be collected electronically, providing a national standard of data collection.

The IRS has modernised methods of data gathering to meet new business needs and has replaced manual data input of paper records with a fully automated electronic data capture system. IRS covers all incident types attended by the service, thus providing qualitative data for fire and rescue service planning and performance indicators.

The system will also supply the future data requirements for the fire and rescue service, improving the timeliness and accuracy of data. It may be used to underpin research and development.

Poor quality or inconsistent information will have the following impact:

- Inaccurate performance information
- Poor planning, risk management and decision making
- Inaccurate performance information
- Inaccurate information being shared with partners and stakeholders
- Gathering high quality information from fire and rescue service attended incidents, is key to understanding and managing risks using the appropriate resources.

Strategic actions

Fire and rescue services should:

- Consider using the IRS system for information on all incidents attended, using a core set of questions – leading to a greater knowledge and understanding of how the fire and rescue service operates.

Tactical actions

Incident commanders should:

- Gather relevant information for IRS (or fire/incident reporting system)
- Complete incident recording system data inputs for all incidents attended in a timely manner

Control measure - Use debrief management systems

Control measure knowledge

Debrief management systems are essential to ensure a robust and consistent means of capturing, or 'closing the loop' of, the outcomes of monitoring, audit and/or review of all operational tasks and activities.

An incident debrief procedure plays a vital part in both personal and organisational learning. It fulfils a critical or key need for effective learning and development by connecting a root cause with an associated effect. Once identified, this process will enable clear plans or programmes to be agreed, which can be used to address or improve any shortfalls in policies, procedures, guidance, processes or information.

Debriefs are a key component of continuous improvement in all organisations.

Strategic actions

Fire and rescue services should:

- Ensure debriefs always take place at the most practical time following the closure of an incident and that they assist in identifying individual, team or organisational learning, both in areas where improvement could be made and where good practice has been identified
- Ensure all relevant information is recorded. Any tasks resulting from this information should be allocated to an appropriate officer
- Ensure debriefs are led in a structured manner to allow all personnel the opportunity to contribute, to highlight good practice and/or areas of development and to be able to do so in an open and constructive environment. Personnel should reference all associated documentation to the incident – Site-Specific Risk Information, SOPs, training manuals, etc., to ensure observations are as detailed as possible
- Ensure the debrief system is managed to enable reports to be produced from information collected from all debriefs – this data will be open to scrutiny, discussion and action
- Make sure all actions created can be monitored to ensure that target dates are met and the final outcome of individual issues are published and reviewed

Tactical actions

Incident commanders should:

- Carry out hot debriefs (Include other agencies if appropriate)

- Ensure debriefs are led in a structured manner to allow all personnel the opportunity to contribute
- Compile and secure all incident command paperwork (including decision logs)

For further information, see National Operational Guidance: Incident command

Control measure – Use information management systems

See National Operational Guidance: Operations – Failure to access information

Hazard – Failure to share information

Hazard	Control measures
Failure to share information	Consider intraoperability and interoperability Use common terms and symbols Liaise with local emergency planning groups

Hazard knowledge

To be effective, new management systems should be capable of integrating with existing systems or disciplines in the organisation, in particular, managing health and safety. Fire and rescue services should consider the integration of fire safety and operational data and ensure that organisational skills are appropriately applied at this critical stage in the operational risk management process.

Managing operational risk information must take into account the existing and future needs for interoperability and mutual aid between neighbouring fire and rescue services and other Category 1 Responders (Civil Contingencies Act 2004). Financial, human and other resources specific to operations should be assessed, including a plan for appropriate technology that takes into account future functionality requirements and the appropriate expertise and training of staff.

Control measure – Consider intraoperability and interoperability

Control measure knowledge

The fire and rescue national frameworks state that fire and rescue services must collaborate with other fire and rescue services, other emergency services, wider Category 1 and 2 responders and local emergency planning groups, to ensure intraoperability and interoperability.

This includes common and compatible communications systems, equipment, command and control and co-ordination arrangements. Sharing information, intelligence and data effectively is key to such collaboration, ensuring an effective and co-ordinated response to foreseeable risks and emergencies.

Strategic actions

Fire and rescue services should:

- Consider the relevant dynamic information that will need to be shared with other emergency responders or partner organisations throughout the course of an incident (Joint Emergency Services Interoperability Programme – Joint Doctrine: The Interoperability Framework)

Tactical actions

Fire control operators should:

- Obtain and share risk information from category 1 and 2 responders during the call handling process
- Disseminate all relevant and emerging information to attending response personnel

Incident commanders should:

- Ensure that they share hazard and other information that may be relevant to other responders

Control measure – Use common terms and symbols

See Failure to interpret information

Control measure – Liaise with local emergency planning groups

Control measure knowledge

Information is critical to emergency response and recovery, yet maintaining the flow of information between agencies, with partners, and to the wider public, is extremely challenging under emergency conditions. The importance of information for emergency responders and those affected by events must not be underestimated.

Effective information management depends on the appropriate preparatory measures being in place to build situational awareness and on developing a Common Recognised Information Picture (CRIP) at the local, sub-national and national levels (if appropriate). Such measures will need to support:

- Transmitting and collating potentially high volumes of information from multiple sources
- Assessing collated information to ensure its relevance, accuracy, timeliness, accessibility, interpretability and transparency
- Translating available information into appropriate information products; for example, briefing the Strategic Co-ordinating Group or national groups, or releasing it to the media for public information

Particular challenges that may need to be addressed in collating, assessing, validating and disseminating information under emergency conditions may include:

- Information management procedures varying between agencies
- Perspectives on the event or situation differing
- Mistakes and misunderstandings occurring under pressure
- Overloaded communications

Strategic actions

Fire and rescue services should:

- Work with others to establish systematic information management systems and embed them in multi-agency emergency management arrangements to enable the right balance to be struck – in particular, sharing information in a way that is responsive to the needs of emergency responders, and is compliant with data protection and other legislation, needs to be thoroughly understood and tested
- Ensure terms and definitions come from national standards and publications rather than local initiative and invention – parochial usage may interfere with interoperability and co-operation with local partners and neighbouring areas, and may hinder co-ordination at the sub-national and national levels, which also applies to concepts of operation, doctrine and structures
- Expect a shared understanding of respective roles and responsibilities, operational capabilities, procedures, guidance and terminology – this may be further enhanced with robust multi-agency plans for managing the foreseeable risks identified in the National Risk Assessment and Community risk registers

Tactical actions

Fire and rescue services should:

- Use common terminology contained in the Cabinet Office Lexicon
- Be familiar with the responsibilities of other Category 1 and 2 responders and the roles of their representatives that may attend operational incidents

Health, Safety and Welfare – Hazards that exist at every incident

Operational guidance relating to common hazards and control measure that may need to be applied at any incident regardless of environment or activity.

Hazard – Failure to manage health, safety and welfare

Hazard	**Control measures**
Failure to manage health, safety and welfare	Undertake pre-planning • Consider engineering controls • Consider training and competence • Assess risk from lone working Follow safe person principles Identify and communicate the hazard Eliminate the hazard Reduce exposure to the hazard

	Isolate the hazard Control the hazard Wear appropriate personal protective equipment (PPE) and/or respiratory protective equipment (RPE) Consider welfare Follow post-incident protocols Have appropriate health surveillance

Hazard knowledge

Fire and rescue authorities have a duty to ensure the health, safety and welfare at work of their employees and that their operations do not adversely affect the health and safety of other people. This duty is qualified by the test of what is reasonably practicable and therefore all risks need not be eliminated. Even when all reasonably practicable precautions have been taken to deal with foreseeable risks, harm could still occur.

Employees also have a duty to take reasonable care of their own health and safety, and any other person, and to co-operate with their employer in protecting people from harm. Individuals should operate as an effective team member within safe systems of work and be competent and knowledgeable about hazard and risk; this will give personnel sufficient knowledge to carry out dynamic risk assessments.

See: Striking the balance between operational and health and safety duties in the Fire and Rescue Service, HSE 2010

See: Fire and Rescue Authorities. Health, Safety and Welfare Framework for the Operational Environment

Control measure - Undertake pre-planning

Control measure knowledge

Fire and rescue authorities must have in place adequate plans, policies, risk assessments and procedures to protect their employees and others from harm. Strategic risk assessments must be carried out to identify significant hazards that may be present at incidents, identify appropriate control measures, set out safe systems of work, equipment, competencies and training.

Strategic risk assessments should consider human factors, that people can make mistakes, which may lead to an accident or an escalation of the incident. Fire and rescue services should develop systems that reduce the likelihood or impact of individual failure impacting safety.

See: The Management of Health and Safety at Work Regulations 1999

Strategic actions

Fire and rescue services should:

- Carry out strategic risk assessments to identify foreseeable hazards within their area and identify control measures that eliminate or reduce risk
- Pre-plan for operational responding personnel, which may include preparation on:
    - Awareness, risk factors and how injuries can occur
    - Carrying out safer working (for example good handling techniques for manual handling, hearing protection for noise)
    - Appropriate systems of work for the individual's tasks and environment
    - Using mechanical aids, additional equipment and/or protective equipment
    - Practical work to allow a trainer to identify and put right anything not practised safely (for example, initial training application, maintenance of skills and competence, training exercises)
    - Core, fitness or preventative techniques (for example, prevention of injury awareness)

Tactical actions

Fire and rescue services should:

- Implement appropriate control measures based on service risk assessment, procedures and training

Control measure – Consider engineering controls

Control measure knowledge

Strategic risk assessments should consider whether engineering controls are suitable and reasonably practicable to reduce risk at operational incidents. Where risk assessments identify that engineering controls are appropriate fire and rescue services should put in place arrangements to ensure such appliances and equipment can be made available to crews. Examples of engineering controls include:

- Lifting straps/slings (for casualties)
- Aerial appliances (rather than working from ladders for prolonged periods)

Other organisations may have a range of equipment that could prove beneficial at incidents. This equipment would need to be identified and competent personnel required to operate it. The presence of unfamiliar plant and equipment can create additional hazards, as other organisations may not be used to working with fire and rescue service personnel. Therefore, close monitoring of their operation, and detailed briefings on what is required, will be necessary from the incident/sector commander.

Fire and rescue authorities need to ensure that work equipment is constructed or adapted to be suitable for the purpose for which it is used or provided. Plant and equipment should be maintained in a safe condition and only operated by people who have received adequate information, instruction and training.

See: Provision and Use of Work Equipment Regulations 1998 (PUWER) (and equivalent devolved legislation)

Strategic actions

Fire and rescue services should:

- Make arrangements to provide engineering controls where identified by risk assessment
- Have arrangements for the request and mobilisation of specialist appliances, plant and machinery
- Deliver training to ensure that incident commanders are aware of resources that they can request from their own and neighbouring fire and rescue services and partner agencies to assist with the safe resolution of incidents
- Conduct joint training with neighbouring fire and rescue services and partner agencies where incident plans involve the use of appliances and equipment

Tactical actions

Incident commanders should:

- Consider using plant, machinery or other engineering controls to reduce risk
- Consider requesting resources from neighbouring fire and rescue services and partner agencies

Control measure – Consider training and competence

Control measure knowledge

Where local risk assessments identify the need to provide employees with information, instruction and training, fire and rescue services should have systems to ensure acquisition, application and maintenance of this knowledge. Information should include an awareness of common hazards, potential consequences and control measures to be implemented to minimise the risk of harm to emergency responders and others at operational incidents.

Fire and rescue services should consider the required competencies of operational firefighters, supervisors, managers and commanders as part of the risk management process for reasonably foreseeable operational incidents.

Fire and rescue services should consider the training and competence of:

- Operational firefighters
- Supervisors, managers and commanders
- Specialist roles and teams
- Tactical advisers
- Other agencies operating under the safety management of the fire and rescue services

See: Health, safety and welfare framework for the operational environment (Section 6)

Strategic actions

Fire and rescue services should:

- Develop service policy and procedures for the acquisition, application and maintenance of operational competency
- Develop procedures that ensure effective workplace assessment takes place and that it provides objective, constructive feedback immediately after the activity and that a suitable record is maintained

Tactical actions

Incident commanders should:

- Consider the competence of individuals and teams when allocating tasks
- Monitor the performance of personnel and where necessary modify plans to available competencies
- Consider the competence of other agencies operating under the safety management of the incident commander

Control measure – Assess risk from lone working

Control measure knowledge

The law requires employers to consider carefully and then deal with any health and safety risks for people working alone. Decisions to allow lone working at an operational incident should be based on the known levels of the individual's competency and the anticipated risks of the incident ground.

The HSE publication Working alone: Health and safety guidance on the risks of lone working, states that employers have a duty to assess risks to lone workers and take steps to avoid or control risks where necessary. This must include:

- Involving personnel when considering potential risks and their control measures
- Taking steps to ensure risks are removed where possible, or putting in place control measures

Risk assessment should help to determine the right level of supervision. There are some high-risk activities where at least one other person would need to be present, including:

- Working in a confined space, where a supervisor may need to be present, along with someone dedicated to the rescue role
- Working at or near to exposed live electricity conductors

Strategic actions

Fire and rescue services should:

- Ensure that policies relating to lone working include the operational environment

Tactical actions

Incident commanders should:

- Carry out a risk assessment before allowing lone working

- Be aware that some tasks may be too difficult or dangerous to be carried out by unaccompanied personnel
- In situations when a risk assessment shows it is not possible for the task to be conducted safely by lone working, address that risk by making arrangements to provide help or back-up

Control measure – Follow safe person principles

Control measure knowledge

The operational environment can be a dangerous place, one where it may not be possible to establish controls over all hazards and where firefighters, their supervisors and commanders continue to encounter risks. A safe person in the operational environment will identify and communicate appropriate hazard information, significantly reducing the threat of injury and harm.

Unsupervised firefighters should remain acutely vigilant of their environment, in the event that they encounter unexpected or unforeseen circumstances they should be equipped to identify hazards, make an individual assessment of risk and select appropriate action.

See: Health, safety and welfare framework for the operational environment (DCLG) (Section 8)

Strategic actions

Fire and rescue services should:

- Implement the safe person organisational responsibilities identified in 'Health, safety and welfare framework for the operational environment'
- Provide all personnel with information, instruction and training on the safe person individual responsibilities identified in 'Health, safety and welfare framework for the operational environment'

Tactical actions

All responding personnel should:

- Perform tasks in a competent and responsible way and exercise self-discipline within the command and control system
- Recognise physical limitations in performing tasks and personal limitations in knowledge and experience
- Be vigilant and able to identify and react safely to new or unexpected hazards
- Reduce risk by taking action to reduce personal and team exposure to risk
- Communicate safety critical information and unexpected developments to supervisors and commanders

Control measure – Identify and communicate hazards

Control measure knowledge

See National Operational Guidance: Incident command – Situational awareness

See National Operational Guidance: Incident command – Safety management

It is essential for establishing appropriate safe systems of work that incident commanders have an acute awareness of the situation and the hazards that are present. Dynamic risk assessment is the process by which an incident commander in a fast-moving situation will identify hazards and risks faced by those in attendance. Information about the hazards and risk to safety and the preventative measures and safe systems of work should be communicated in an appropriate and timely manner to relevant personnel.

Strategic actions

Fire and rescue services should:

- Provide information, instruction and training to all personnel on common hazards in the operational environment

Tactical actions

Incident commanders should:

- Gather information from a variety of sources to gain accurate situational awareness and understanding
- Ensure that everyone on the incident ground is fully briefed on the current hazards, specific risks and control measures including other agencies and organisations

Control measure – Eliminate the hazard

Control measure knowledge

Eliminating or removing the hazard is the most effective measure that can be implemented to control risk and should always be considered once a hazard has been identified. In an operational environment the ability of the incident commander to completely eliminate a hazard may be limited due to the environment they are operating in or the urgent need to take action.

Strategic actions

Fire and rescue services should:

- Identify from pre-planning any hazards that can be eliminated and communicate to personnel

Tactical actions

Incident commanders should:

- Consider implementing control measures that eliminate the hazard

Control measure – Reduce exposure to the hazard

Control measure knowledge

If it is not possible to fully eliminate the hazard, then exposure should be reduced to limit the risk as far as reasonably practicable. Examples of ways in which this can be achieved include:

- Reducing the amount of time spent in the risk area and avoid repeated exposure
- Increasing the distance from the hazard

Strategic actions

Fire and rescue services should:

- Identify from pre-planning any risks that can be reduced by reduced exposure and communicate to personnel

Tactical actions

Incident commanders should:

- Consider implementing control measures that reduce the exposure of responders to a hazard
- Keep the number of people exposed to the hazard at a minimum and reduce time of exposure through crew rotation

Control measure – Isolate the hazard

Control measure knowledge

See National Operational Guidance: Incident command – Establish appropriate cordon controls

Where more effective controls are impractical the incident commander should consider isolating the hazard at source, or the use of a cordon to isolate persons at risk from the hazard. Once isolated the hazard will still be present in most cases and may need additional control measures to further reduce the risk.

Strategic actions

Fire and rescue services should:

- Use pre-planning to identify hazards that can be effectively isolated and communicate to personnel
- Have policies for limiting access of personnel to the highest risk areas of an incident ground and for briefing and identification of those involved. This policy should include any procedural guidance and such equipment/resources necessary to implement it safely

Tactical actions

Incident commanders should:

- Consider implementing control measures that isolate personnel from the hazard
- Ensure that appropriate inner and outer cordons are established following an assessment of the risk to crews, other agencies and the public

Control measure – Control the hazard

Control measure knowledge

See National Operational Guidance: Incident command – Incident ground safety management

Safe systems of work

Incident commanders should implement safe systems of work identified by service risk assessment, procedures and training. The selected safe system of work should be based on the outcome of a dynamic risk assessment taking account of available resources and competencies.

Supervision

Having a structure of supervision should ensure that the presence of hazards and identified control measures are communicated and implemented to ensure the safety of those operating on the incident ground. The use of sectorisation and functional roles at an incident should be implemented to ensure an appropriate and effective level of supervision.

Strategic actions

Fire and rescue services should:

- Identify from pre-planning any hazards that can be controlled using safe systems of work and supervision
- Have procedures for the safe management of incidents that include communication and supervision

Tactical actions

Incident commanders should:

- Select appropriate actions by applying the decision control process to the information gathered, avoiding decision traps
- Establish an incident command structure appropriate to the likely size and complexity of the incident considering sectors, functions, command support and tactical advisers
- Appoint suitably competent safety officers to observe specific hazards and/or activities or monitor risks to personnel at the incident

Control measure –Wear personal protective equipment (PPE) and/or respiratory protective equipment (RPE)

Control measure knowledge

PPE is equipment that will protect the user against health or safety risks. It can include items such as helmets, gloves, eye protection, high-visibility clothing, safety footwear and safety harnesses. PPE should be regarded as a last resort where risks to health and safety cannot be adequately controlled in other ways. Service risk assessments should define the specific PPE required for an activity to avoid misconception.

If more than one item of PPE is to be worn, they must be compatible with each other and when used together, should adequately control the risks. PPE must be maintained in good working order and properly stored when not in use. Employees must make proper use of PPE in accordance with training received and report its loss, destruction or any fault in it.

Respiratory protective equipment (RPE) is a particular type of personal protective equipment (PPE) designed to protect the wearer from breathing in harmful substances, or from oxygen-deficient atmospheres, when other controls are either not possible or insufficient on their own.

The two main types of tight-fitting RPE are respirators and breathing apparatus:

- Respirators (filtering devices) use filters to remove contaminants from the air being breathed in. Non-powered respirators rely on the wearer breathing to draw air through the filter
- Breathing apparatus (BA) requires a supply of breathing-quality air from an independent source (e.g. air cylinder)

Where RPE is used, it must be able to provide adequate protection for individual wearers. RPE cannot protect the wearer if it leaks. A major cause of leaks is poor fit – tight-fitting face pieces need to fit the wearer's face to be effective.

See: Personal Protective Equipment at Work Regulations 1992

Strategic actions

Fire and rescue services must:

- Provide employees with suitable personal protective equipment and respiratory protective equipment that fits the wearer correctly and adequately controls identified risks
- Ensure that personal protective equipment and respiratory protective equipment worn simultaneously is compatible and does not negatively impact other safety measures

Fire and rescue services should:

- Specify the level of PPE and RPE for hazards identified through risk assessment and communicate to personnel

Tactical actions

Incident commanders should:

- Ensure that all personnel wear the level of PPE and RPE identified by service risk assessments, procedures and training

Emergency responders should:

- Wear specified PPE and RPE in accordance with service risk assessments, procedures and training

Control measure - Consider welfare

Control measure knowledge

Adopting appropriate welfare arrangements at operational incidents will assist with the safe and effective management of personnel and provide them with welfare support, whether physical or mental. By having effective arrangements for the management of welfare and physical wellbeing at incidents, fire and rescue services will support several key elements of the safe person principles.

Consideration should be given to work rotation, rest, recovery and reliefs taking account of activities undertaken and weather conditions. At protracted incidents provision should be made for suitable sanitary conveniences and hygiene facilities; an adequate supply of drinking water should be provided for all personnel.

See: Workplace (Health, Safety and Welfare) Regulations 1992

Strategic actions

Fire and rescue services should:

- Make suitable arrangements to provide welfare for personnel at protracted operational incidents including shelter, drinking water, hygiene and sanitary conveniences.

Tactical actions

Incident commanders should:

- Consider relief and welfare arrangements to reduce the effects of stress and fatigue on themselves and others

Control measure - Follow post-incident protocols

See National Operational Guidance: Operations – Closing stages and incident handover

See The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013

Control measure – Have appropriate health surveillance

Control measure knowledge

Health surveillance allows for early identification of ill health and helps identify any corrective action needed. Health surveillance may be required by law if personnel are exposed to noise or vibration, solvents, fumes, dusts, biological agents and other substances hazardous to health, or work in compressed air. Appropriately trained and competent health professionals must undertake this, especially where there is a regulatory requirement to monitor the health of personnel.

Fire and rescue services should also provide for the effective monitoring of mental health and wellbeing of all operational personnel to ensure that any exposure to psychological hazards can be monitored. Critical incident stress management procedures should be considered as part of an intervention to minimise the impact of traumatic incidents on individuals and to reduce work related stress.

See also:

The Control of Noise at Work Regulations 2005

The Control of Substances Hazardous to Health Regulations 2002

The Control of Asbestos Regulations 2012

The Control of Lead at Work Regulations 2002

The Ionising Radiations Regulations 1999

(and equivalent devolved legislation)

Strategic actions

Fire and rescue services must:

- Have procedures for health surveillance following exposure of personnel to substances where there is a legal requirement to do so

Fire and rescue services should:

- Have procedures for the monitoring of mental health and wellbeing following exposure to traumatic incidents

Tactical actions

Incident commanders should:

- Follow service protocols for post incident health surveillance and monitoring

Hazard – Physical hazards

Hazard	Control measures
Physical hazards	Manage hazards in the physical environment

Hazard knowledge

Physical hazards occur when objects such as equipment and tools, or areas of the working environment, come into contact or have an effect on a person, resulting in the potential to cause actual physical injury.

Examples of physical hazards include:

- Uneven and slippery surfaces leading to slips, trips and falls
- Poor lighting
- Falls from height
- Bodies of water
- Extremes of temperature
- Noise
- Vibration
- Manual handling/ergonomic injuries
- Vehicle movement
- Animals
- Electrics
- Grinding
- Sharps

Some physical hazards can be associated with a variety of actions. For example, a manual handling hazard could be attributed to lifting, posture, awkward and/or repetitive movements, use of force or

improper or unsuitable use of equipment. Or a heat induced hazard, as a further example, could be directly related to the weather, to workload/task, or both.

At operational incidents personnel could at times be exposed to higher levels of threat of injury from physical hazards than in normal situations (applicable to the circumstances). In every case a full assessment is vital to put additional control measures in place and avoid unacceptable exposure.

A hazard may outweigh or potentially outweigh the benefit of action. In such cases it may be appropriate to adopt a 'defensive mode' until further measures are implemented.

See also:

National Operational Guidance: Utilities (To follow)

National Operational Guidance: Transport

National Operational Guidance: Animal Rescue (To follow)

Control measure - Manage hazards in the physical environment

Control measure knowledge

At any incident the physical working environment may present hazards to safe operations such as uneven and slippery surfaces, changes in level and bodies of water. The time of day, weather conditions and the light level can increase the risk to responders operating in such working environments.

The risk of slips and trips can be reduced by effectively managing the working environment, individuals maintaining vigilance and indicating/illuminating the presence of hazards. When working near bodies of water or changes in level personnel should be isolated from the hazard where possible rather than relying on supervision or PPE.

See: National Operational Guidance: Subsurface, height and structures (To follow)

See: National Operational Guidance: Water rescue and flooding

See: The Workplace (Health, Safety and Welfare) Regulations 1992

Strategic actions

Fire and rescue services should:

- See Failure to manage health, safety and welfare

Tactical actions

Incident commanders should:

- Gather information from a variety of sources to gain accurate situational awareness and understanding
- Ensure that everyone on the incident ground is fully briefed on the current hazards, specific risks and control measures including other agencies and organisations
- Manage risk in the physical environment using a hierarchy of control approach

- Identify and communicate safe traffic routes and establish clear zones and equipment dumps
- Provide lighting to illuminate hazards to personnel in poorly lit environments

Hazard - Falls from height

Hazard	Control measures
Falls from height	See National Operational Guidance: Sub-surface, height and structures (To follow)

See National Operational Guidance: Sub-surface, height and structures (To follow)

Hazard – Bodies of water

Hazard	Control measures
Bodies of water	Manage risk from bodies of water

Hazard knowledge

At an incident, crews may be required to conduct operational activity in the vicinity of a body of water such as a lake, reservoir, pond, quarry, stream or swimming pool. There is the possibility of personnel entering the water leading to risk of submersion, entanglement, cold water shock, hypothermia and ultimately drowning.

Control measures for working near bodies of water should also be considered for operational activity near ice and unstable ground such as mud, gravel, earth, slurry and free flowing solids. For the purposes of this guidance working 'near' unguarded bodies of water and unstable ground should be considered to be within three metres.

For more information on crews working on or in bodies of water, see National Operational Guidance: Water rescue and flooding

For more information on operational activity in the context of docks, harbours, marinas, canals and rivers, see National Operational Guidance: Transport

Control measure – Manage risk from bodies of water

Control measure knowledge

It is important that fire service personnel understand the risks presented by working near water and unstable surfaces. Where possible incident commanders should isolate crews from the body of water using existing or improvised barriers. Work restraint systems, such as harnesses and rope based systems, should be established to prevent the uncontrolled entry of personnel. As a precaution crews working near water or other unstable surfaces should wear suitable personal floatation devices such as life jackets or buoyancy aids. Incident commanders should assess the risks

associated with an uncontrolled fall into water whilst wearing fire helmets and adopt service procedures.

Strategic action

Fire and rescue services should:

- Identify significant bodies of water and similar hazards in their service area and have arrangements to share with responding crews using risk information systems
- Provide suitable PPE and other equipment to reduce risk from drowning when entering a body of water
- Provide responders with information and training on the actions to take in accidental entry to water
- Ensure that crews are aware of the risks and associated control measures for working near bodies of water and unstable surfaces

Tactical actions

Incident commanders should:

- Identify and communicate the presence of any body of water or unstable surface to all responders
- Ensure that crews operate on the safe side of existing guarding near water or unstable surfaces
- Establish and maintain an exclusion zone around any body of water or unstable surface where no existing guarding exist
- Implement safe systems of work for crews working within three metres of water where no suitable guarding exists
- Appoint a safety officer to monitor the risk from any body of water or unstable surface
- Manage hazards in the working environment that could lead to slips, trips and falls into bodies of water or unstable surfaces
- Ensure that personnel wear suitable PPE and personal floatation devices when working near bodies of water

Hazard – Extremes of temperature

Hazard	Control measures
Extremes of temperature	Manage physiological stress

Hazard knowledge

Operational incidents can occur in a wide range of environments at any time of the year and in any weather conditions. The impact of environmental conditions may adversely affect the ability of

responders to operate effectively over long periods of time. The effect of the conditions on personnel should be closely monitored and measures taken to reduce ill health effects from exposure.

Control measure – Manage physiological stress

Control measure knowledge

Fatigue is a subjective feeling of tiredness which has a gradual onset; it can have physical or mental causes and may significantly affect a person's ability to perform tasks. Dehydration occurs when the body loses more fluid than it takes in; minerals in the body get out of balance which affects the way that it functions.

Physiological stress is the body's response to a stressor such as an environmental condition or a stimulus. Depending on the stressful event, the body's way to respond to stress is by sympathetic nervous system activation which results in the fight-or-flight response. Examples of physiological stress are hypothermia and heat stress:

- Hypothermia happens when a person's body temperature drops below 35°C (normal body temperature is 36.5–37.5 °C). Hypothermia can quickly become life threatening and should be treated as a medical emergency. It's usually caused by being in a cold environment and can be triggered by a combination of things such as being outdoors in cold conditions for a long time or falling into cold water.
- Heat stress occurs when the body's means of controlling its internal temperature starts to fail; as well as air temperature, factors such as work rate, humidity and clothing worn while working may lead to heat stress. Heat stress can give rise to the medical conditions heat exhaustion and, more seriously, heat stroke.

For further information, see: Consider Welfare

Strategic actions

Fire and rescue services should:

- See Failure to manage health, safety and welfare
- Provide information to assist emergency responders in identifying signs and symptoms of fatigue, dehydration, heat stress and hypothermia

Tactical actions

Incident commanders should:

- Monitor personnel exposed to extremes of temperature for signs and symptoms of heat stress or hypothermia
- Instigate appropriate medical interventions if personnel show signs and symptoms of physiological stress
- Rotate personnel undertaking arduous manual tasks and consider a relief strategy

Hazard – Noise

Hazard	Control measures
Noise	Reduce risk from exposure to noise

Hazard knowledge

Exposure to excessive noise over a period of time can lead to permanent hearing loss or Tinnitus. Factors that contribute to hearing damage are noise levels and how long people are exposed to the noise, daily or over a number of years. Permanent hearing damage can be caused immediately by sudden, extremely loud, explosive noises, e.g. from guns or cartridge-operated machines.

See: The Control of Noise at Work Regulations 2005

Control measure – Reduce risk from exposure to noise

Control measure knowledge

Fire and rescue service must assess the risk and identify measures to eliminate or reduce the consequences of exposure to noise. Pre-planning should identify known sources of noise and identify control measures that reduce risk. Incident commanders in dynamic environments should identify safe systems of work which may include eliminating the noise by switching off equipment, increasing the distance of the people at risk from the source or wearing hearing protection.

Strategic actions

Fire and rescue services must:

- Assess and identify measures to eliminate or reduce risk from exposure to noise in the workplace

Fire and rescue services should:

- See Failure to manage health, safety and welfare

Tactical actions

All responding personnel should:

- Eliminate noise hazards by switching off the source of the noise
- Reduce exposure by rotating crews and increasing the distance from the hazard
- Wear hearing protection as identified in service risk assessment, procedures and training

Hazard – Vibration

Hazard	Control measures
Vibration	Reduce risk from exposure to vibration

Hazard knowledge

Hand-arm vibration comes from the use of hand-held power tools and can result in significant ill health. Whole-body vibration is transmitted through the seat or feet of employees who drive mobile machines, or other work vehicles, over rough and uneven surfaces as a main part of their job. Large shocks and jolts may cause health risks including back-pain.

See: The Control of Vibration at Work Regulations 2005

Control measure – Reduce risk from exposure to vibration

Control measure knowledge

The assessment of the risk to health created by vibration at the workplace is a legal requirement and the regulations establish exposure limit values and action values. Preplanning should consider the magnitude, type and duration of exposure, manufacturer's information and working conditions such as low temperatures. In a dynamic operational environment incident commanders should apply a hierarchy of control approach to minimising risk from hand arm and whole body vibration.

Strategic actions

Fire and rescue services should:

- Assess and identify measures to eliminate or reduce risk from exposure to hand-arm vibration
- See Failure to manage health, safety and welfare

Tactical actions

Incident commanders should:

- Ensure that all personnel follow service procedures when operating equipment
- Consider rotating crews using equipment for long periods of time

Hazard – Heavy and bulky objects

Hazard	Control measures
Heavy and bulky objects	Adopt correct manual handling techniques

Hazard knowledge

Moving items by lifting, lowering, carrying, pushing or pulling can create a risk of musculoskeletal injury. In controlled environments these risks can be reduced by making loads smaller or lighter and organising the environment to make tasks less stressful on joints and muscles.

Control measure – Adopt correct manual handling techniques

Control measure knowledge

In the operational response phase a greater emphasis is placed on personnel to assess their individual capabilities against the task and apply techniques according to service training.

The movement of casualties involved in incidents, especially unresponsive, uncooperative or bariatric people, presents a manual handling risk to crews. Services should consider providing mechanical aids such as straps, harnesses, sleds, scoops and stretchers to assist crews. The training of crews in effective casualty movement techniques that minimise the risk of musculoskeletal injury should also be considered.

See National Operational Guidance: Performing rescues – Bariatric casualties and use casualty transfer equipment

See: The Manual Handling Operations Regulations 1992

Strategic actions

Fire and rescue services must:

- Make a suitable and sufficient assessment of manual handling operations that involve a risk of injury

Fire and rescue services should:

- See: Failure to manage health, safety and welfare

Tactical actions

Incident commanders should:

- Rotate personnel undertaking arduous manual tasks and consider a relief strategy
- Request additional resources to assist with manual handling tasks

All responding personnel should:

- Consider using plant, machinery or other engineering controls to reduce risk
- Consider the task, individual capabilities, load and environment (TILE) when undertaking manual tasks
- Adopt techniques when lifting, lowering, carrying, pushing or pulling according to service training

Hazard – Moving vehicles

Hazard	Control measures
Moving vehicles	Manage vehicle movements

Hazard knowledge

Accidents relating to vehicle movements can cause injury to responding personnel or the public, damage to vehicles and equipment and may result in a reduced operational capability. Vehicle

movements could be related to emergency service operations, site activities or related to the context of the incident.

See National Operational Guidance: Transport

Control measure – Manage vehicle movements

Control measure knowledge

Services should have procedures designed to ensure that the risk of collisions are minimised and employees should co-operate at all times. Considerations for safe vehicle movements might include establishing a marshalling sector, speed restrictions, conspicuous clothing, the use of a banksperson and communication with other emergency responders.

Strategic actions

Fire and rescue services should:

- See: Failure to manage health, safety and welfare

Tactical action

Incident commanders should:

- Consider the risk of vehicle collisions when deploying resources
- Establish a marshalling sector at incidents involving a significant number of vehicles
- Request the police to establish a traffic cordon where necessary

All responding personnel should:

- Be vigilant and co-operate with service procedures relating to vehicle movements

Hazard – Animals

Hazard	Control measures
Animals	Manage risk from animals

Hazard knowledge

Domesticated and non-domesticated animals or insects could be encountered in any environment while conducting fire service operations including dwellings, farms, medical research facilities and zoos.

Hazards that may arise during or following contact with animals or insects include:

- Crush injuries
- Puncture wounds
- Abrasions, cuts and bruising
- Bites and stings

- Infection

Encountering animals or insects may result in personnel from the fire and rescue service, other emergency services and agencies being unable to deliver operational plans effectively; any resultant delay may result in the incident deteriorating.

Control measure – Manage risk from animals

Control measure knowledge

Assistance from owners or keepers should be sought if appropriate, or consider other agencies such as animal welfare charities. In particular, consider issues arising from the presence of animals or insects such as the risk of infection or disease and their implications on casualty care.

For further information, see: National Operational Guidance – Animal rescue (To follow)

Strategic actions

Fire and rescue services should:

- See: Failure to manage health, safety and welfare

Tactical actions

Incident commanders should:

- Consider isolating crews from animals using existing or improvised barriers
- Request support regarding the management of animals from owners, keepers, police, specialist advisers or welfare organisations

Hazard – Biological hazards

Hazard	Control measures
Biological hazards	Manage risk from biological hazards

Hazard knowledge

Biological hazards are those that involve living things, whether they come from people, animals, or plants. These hazards are present in the working environment and have the potential to come into contact with firefighters and cause physical injury or illness. By their nature these hazards can be unseen or unidentifiable to personnel (particularly in the case of micro-organisms).

Biological hazards include:

- Infections
- Viruses
- Bacteria
- Body fluids
- Animal fluids

- Bites
- Stings
- Zoonosis

A biohazard can enter the body through skin contact, puncture wounds, cuts, inhalation and ingesting contaminated food or drink.

Serious health risks can be attributed to exposure to specific biological hazards, such as acute long term health problems or the risk of miscarriage. See HSE: Infections at work (Appendix 2: Common occupational infection p22-27)

Biological hazards may be encountered in a wide range of operational incidents:

- Hospitals (isolation wards, post mortem areas, medical schools, laboratories)
- Biotechnology laboratories using genetically modified organisms
- Universities and colleges
- Veterinary laboratories, quarantine kennels, abattoirs
- Government research establishments
- Biological, medical, animal research establishments
- Farms, zoos, wildlife parks
- Sewers, sewage treatment plants and flood water
- Casualty handling, transport incidents or other special service calls
- Residential premises where persons may be infected
- Post offices and mail delivery couriers
- Funeral parlours/embalmers
- Biological warfare or terrorist incidents

For more detailed information see Public Health England - Infectious diseases

Control measure – Manage risk from biological hazards

Control measure knowledge

When the presence of biological hazards at an incident has been identified as a risk the incident commander should consider requesting expert advice from Hazardous Materials Adviser (HMA) and reclassifying the incident as hazardous materials. Where minor risks can be isolated from crews or other measures implemented that adequately control the risk other operational activities may be conducted safely.

Routes of exposure should be considered when identifying control measures:

- Inhalation: Establishing good ventilation and selecting respiratory protective equipment appropriate to the hazard are key control measures.

- Absorption: Avoid skin contact with the hazard and wear PPE that prevents contact including protective gloves (first aid type) and eye protection. Strict hygiene procedures should be established including welfare facilities, antibacterial wash or wipes.
- Ingestion: In areas of likely contamination the risk of ingestion can be reduced through the avoidance of eating, drinking and smoking.
- Injection: Exposure can occur when a sharp object punctures the skin; this could be a rusty nail, a discarded hypodermic needle or an animal sting. Where exposure cannot be avoided by reduction/isolation, PPE that provides protection from injection should be considered.

For decontamination procedures see National Operational Guidance: Hazardous materials.

Strategic actions

Fire and rescue services should:

- Ensure crews are aware of the risks presented by the presence of biological hazards and understand the associated safe systems of work
- Have suitable clinical waste disposal procedures, including use of sharps containers

Tactical actions

Incident commanders should:

- Consider handing responsibility for the incident to another agency (e.g. police or an environmental agency)
- Seek advice from on-site specialist or a hazardous materials adviser (HMA)
- Instigate and communicate a hygiene plan/arrangements, providing hygiene facilities and considering potential decontamination requirements
- Consider decontamination following exposure of crews to biological hazards
- Consider the risk of exposure to contaminated sharps, especially in high risk environments

Emergency responders should:

- Declare to the service or incident commander any allergies that could give rise to anaphylactic shock
- Comply with hygiene arrangements and refrain from eating, drinking and smoking
- Ensure open wounds, cuts and grazes are covered by a waterproof dressing

Hazard - Body fluids

Hazard	Control measures
Body fluids	Manage risk from body fluids

Hazard knowledge

Operational responders are likely to encounter body fluids from casualties at a range of incident types where blood, vomit or faeces may be present. Exposure to body fluids carries a risk of exposure to blood borne virus such as HIV and hepatitis and other infectious micro-organisms.

Control measure – Manage risk from body fluids

Control measure knowledge

Whenever possible unnecessary contact with body fluids should be avoided. Personnel should cover broken skin with waterproof dressings prior to attendance and wear appropriate clinical body fluid gloves. Clinical waste storage and transportation arrangements should be considered for contaminated clothing and equipment.

Strategic actions

Fire and rescue services should:

- See Failure to manage health, safety and welfare

Tactical action

Incident commanders should:

- Be aware that body fluids may remain in the working area after casualty removal – cover or isolate affected areas
- Consider decontamination procedures following exposure of personnel and equipment to body fluids

All responding personnel should:

- Avoid contact with body fluids where possible
- Wear body fluid gloves and cover broken skin with waterproof dressing

Hazard – Waterborne microorganisms

Hazard	Control measures
Waterborne microorganisms	Manage risk from waterborne disease

Hazard knowledge

Contact with or accidental consumption of infected water can lead to diseases caused by microorganisms including protozoa, bacteria, viruses, parasites and pathogens. A range of fire and rescue service responses may bring personnel into contact with these hazards including flooding, water rescue, firefighting and hazardous materials.

See National Operational Guidance: Water rescue and flooding

Hazard - Chemical hazards

Hazard	Control measures
Chemical hazards	Manage risk from chemical hazards

Hazard knowledge

The term 'chemical hazard' refers to liquids, gases or solids that can harm people, other living organisms, property or the environment.

Certain chemicals pose various health hazards when they are inhaled, come into contact with the skin or eyes, or are ingested. Examples include:

- Gases
- Dusts
- Fumes
- Vapours
- Liquids
- Toxic substances
- Corrosive substances
- Asphyxiates
- Solvents
- Smoke
- Carbon monoxide
- Radioactive substances
- Asbestos
- Silica

Fire and rescue service personnel attend a wide variety of incident types and may be called on to deal with chemical spillages or releases. Fire and rescue operations may produce chemical hazards, such as fire water run-off. In some cases, the incident attended will manufacture chemical hazards such as smoke or carbon monoxide.

There are vast numbers and diverse types and volumes of potential chemical hazards that could pose a threat to firefighters. Chemical hazards could also be revealed, encountered or used in storage, manufacturing processes, disposal or waste processes and are therefore likely to be present at most operational incidents.

Exposure to a chemical may affect the health of individuals or of the wider population and can in extreme cases lead to fatalities. The effects may be immediate or delayed. Incident commanders and firefighters must evaluate and assess the hazards.

When approaching an incident with casualties and there is no known reason for their incapacity, incident commanders should use the Step 1-2-3 model.

See DCLG/CFRA- Hazardous materials: operational guidance for the fire and rescue services

See National Operational Guidance: Hazardous materials

See National Operational Guidance: Environmental protection

Control measure – Manage risk from chemical hazards

Control measure knowledge

Incident commanders should use situational awareness to identify chemical hazards at incidents. Exposure to chemicals could come from a range of sources including smoke and fire gases, foam concentrate, exhaust fumes, dusts, airborne fibres, petrol, diesel and other mineral oils.

It is vital to identify the type of chemical(s) and to adopt appropriate control measures. It may also be appropriate, and a requirement of the incident safety management, to seek further information or advice to manage any threats to firefighters effectively.

See The Control of Substances Hazardous to Health Regulations 2002

See National Operational Guidance: Hazardous materials

Strategic actions

Fire and rescue services should:

- See Failure to manage health, safety and welfare

Tactical actions

Incident commanders should:

- Adopt 'STEP 1-2-3+: Safety Triggers for Emergency Personnel'
- Identify whether the incident should be reclassified as a hazardous materials response
- Remove unaffected chemicals from the hazard area if safe to do so
- Consider mechanical isolation of leaks of chemicals, gas or vapour or contain spillages
- Consider ventilating areas e.g. carbon monoxide
- Wearing specialist PPE (e.g. gas tight suit/chemical protection coverall that reduce the exposure of personnel to the hazard)

All responding personnel should:

- Comply with service protocols when handling chemical substances that are hazardous to health

Hazard - Psychological hazards

Hazard	Control measures

Psychological hazards	Manage risk from psychological hazards

Hazard knowledge

The effects of psychological hazards can be as debilitating as a physical injury. Excessive pressure caused by psychological hazards can cause stress, which harms the ability to think, communicate and operate effectively.

Stress occurs when an individual sees a difference between the demands placed on them and their ability to cope. Working under high demands in a challenging environment may also lead to both physical and mental fatigue. Psychological hazards can affect incident command and impair the functioning of a commander, individual or team. For example, anxieties and stressors take up part of a person's mental processing capacity and can distract attention from the situation. This can reduce the available capacity for focusing on and understanding information. If important information is neglected or not processed properly it may lead to an inaccurate mental picture of the situation. Equally the effects of exposure to psychological hazards can be experienced long term (post incident or event), and may not be fully appreciated or experienced if not identified at the earliest stage.

The effect of experiencing and being exposed to psychological hazards can differ from individual to individual and from team to team. As each incident is different, the exact pressures and demands are difficult to predict. Fire and rescue service personnel should be able to function, while being aware of stress and fatigue. They need to communicate, make critical decisions and process information. They should be able to understand how both stress and fatigue affect these processes.

Psychological hazards may be present at any operational incident and most hazards can be identified and appropriate control measures adopted. However, there are subconscious and external underlying reasons (such as previous exposure or history) that the reactions or wellbeing of an individual may differ, or be affected in a variety of ways and at many levels.

Fire and rescue services should develop a culture, awareness and common understanding of psychological hazards and have appropriate post-incident processes in place. These should be supported with occupational health arrangements (such as identifying, reporting, monitoring and self-reporting measures and arrangements)

For more information, see National Operational Guidance: Performing rescues

Control measure – Manage risk from psychological hazards

Control measure knowledge

The possible impact of critical incidents on employees can be minimised through raising awareness of the causes and potential effects of the pressure and stressors that may occur at operational incidents. These should be reflected in occupational health policies and operational policy development. Incident commanders should be aware of the effect that traumatic incidents can have on themselves and others in both the short and long term.

Consideration should be given to the provision of critical incident debrief procedures following incidents that involve exposure to traumatic scenes.

Strategic actions

Fire and rescue services should:

- See Failure to manage health, safety and welfare

Tactical actions

Incident commanders should:

- Consider handing over responsibility for traumatic incidents to another appropriate agency where the fire service does not have primacy (police, ambulance service, funeral director etc.)
- Minimise number of personnel exposed to traumatic scenes where possible
- Erect screens to restrict the view of traumatic scenes
- Instigate service procedures for the support of firefighters exposed to traumatic scenes

Hazard – Involvement of people

Hazard	Control measures
Involvement of people	Situational awareness Establish appropriate cordon controls Establish casualty care arrangements Request police support and assistance Consider evacuation of people Warn, inform, instruct and update people Plan reception centres

Hazard knowledge

The involvement of people at operational incidents can present hazards to emergency responders in a number of ways, which may be identified on arrival, during or in the closing stages of an incident. The following are examples of potential hazards posed by people when an emergency occurs:

- Obstruction to emergency responders – this may may be accidental or deliberate and may happen en-route to an incident or at the scene. The size and complexity of the incident, any political undertones and the number of people involved may be influential factors
- Large/overwhelming numbers of people – both physically injured or uninjured who may be attempting to leave the scene and will need to be controlled and processed to a safe area(s)
- Violence and aggression – people motivated to cause harm to emergency responders due to political influences or psychological injury
- Contamination from harmful substances – for further information see National Operational Guidance: Hazardous materials

- Physical and/or psychological injury – which may result in panic and additional harm, danger to others including emergency responders, incident escalation, body fluid contamination and chronic psychological injury
- Social media – resulting in inaccurate perceptions and negative responses and the inappropriate release of sensitive information to relatives and friends of those involved

People affected by emergencies generally fall into three groups:

- Primary victims or survivors – individuals who have been directly impacted by the resulting damage and loss
- Emergency responders – firefighters, ambulance teams and paramedics, police and other emergency services
- Indirect observers – friends, relatives, and onlookers, this group can be quite large

When an incident occurs people will react in a variety of ways which may have a positive or negative effect on emergency responders and others involved, including the wider community. This will be influenced by the actions and/or inaction of emergency responders in considering the needs of people involved and the perceptions of those who are observing.

For further information, see Emergency Response and Recovery, Non statutory guidance accompanying the Civil Contingencies Act 2004

Control measure - Situational awareness

See National Operational Guidance: Incident command

Control measure - Establish appropriate cordon controls

See National Operational Guidance: Incident command

Control measure - Establish casualty care arrangements

Control measure knowledge

See National Operational Guidance: Performing rescues

The primary providers of casualty care at operational incidents are likely be the ambulance service, paramedics, doctors, Hazardous Area Response Teams (HART) or other medical organisations. Fire and rescue services may provide trauma care trained personnel at incidents. Depending on the numbers of people involved it may be necessary to instigate appropriate arrangements, equipment and facilities to effectively manage casualties.

See National Operational Guidance: Performing rescues – Multiple casualties

Strategic actions

Fire and rescue services should:

- Develop guidance and support arrangements for fire and rescue service personnel to provide casualty care at operational incidents

- Develop appropriate procedures with partner agencies to effectively manage casualties

Tactical actions

Incident commanders should:

- Confirm and communicate the number, type and severity of casualties at the earliest opportunity
- Assess and triage the condition of casualties
- Consider establishing and resourcing a suitable casualty care point

Control measure – Request police support and assistance

Control measure knowledge

At some incidents crews may be faced with violent or threatening behaviours from individuals or groups of people, such behaviours may on occasion be fuelled by alcohol, substance abuse or organised public disorder.

Where people present a hazard to emergency responders at incidents, specialist support may be required to reduce the risks. The police can provide advice and assistance in such circumstances involving, for example; crowd control and evacuation, aggression and violence, looting and criminal activity (including deliberate fire-setting). The police will be responsible for co-ordinating investigations and disaster victim identification, family liaison and casualty bureau.

Strategic actions

Fire and rescue services should:

- Liaise with police services and other partner agencies to develop mutual understanding regarding operational interoperability at incidents involving the public
- Develop guidance and support arrangements for circumstances where the fire and rescue service requires police assistance

Tactical actions

Incident commanders should:

- Consider adopting defensive tactics when presented with violence or aggression from the public
- Instigate arrangements for police support at incidents involving violence and aggression towards crews

Control measure - Consider evacuation of people

Control measure knowledge

Emergency evacuation is the immediate and urgent movement of people away from the threat or actual occurrence of a hazard. Since emergencies are relatively rare individual responses can vary from inaction to panic; a key factor in maintaining control and order when conducting evacuation is communication. See control measure: Warn, inform, instruct and update people.

Without specific instruction people may rush to escape a developing situation, which could result in an uncontrolled stampede towards a destination that may cause further danger, for example; bottlenecks in areas of danger and trampling of people.

Evacuation time concerns not only the time taken for individuals to move towards an exit, but also the time taken before movement is initiated i.e. the time taken to recognise there is a danger and to then decide which is the most appropriate course of action. Therefore, to enhance evacuation efficiency and, in particular, to start people moving, communication and information are vital.

For further information, see - Cabinet Office publication - Understanding Crowd Behaviours: Supporting Evidence

Strategic actions

Fire and rescue services should:

- Make arrangements with partner agencies to develop appropriate means to evacuate people from emergency incidents
- Ensure that incident commanders have access to pre-determined evacuation plans for venues that have developed these
- Develop guidance and support arrangements for the safe evacuation of people

Tactical actions

Incident commanders should:

- Identify whether evacuation or stay put is the best action and record rationale for decision
- When evacuation is necessary, identify the number of people and develop a strategy
- Ascertain the availability of pre-arranged evacuation plans
- Establish a safe evacuation point and consider safe egress routes and refuge points

Control measure - Warn, inform, instruct and update people

Control measure knowledge

Emergency services are obliged to maintain arrangements to warn the public, and to provide information and advice, if an emergency is likely to occur or has occurred (Civil Contingencies Act 2004). People involved in emergency incidents and hence those requiring warning, information, instruction and updates include; survivors, family, relatives, friends and general public and emergency responders.

Information communicated to, or withheld from, people can influence their behaviour. Hence, communicating with people, particularly groups or crowds of people is essential in maintaining order and managing behaviour. When an emergency occurs, the key communications objective will be to deliver accurate, clear and timely information and advice to the public so they feel confident, safe and well informed.

Warnings – to be both interpreted accurately and believed – should:

- Be specific

- Be comprehensible
- Be timely
- Be historically valid
- Come from a credible source (a trusted person)
- Convey the nature and extent of the danger
- Enable rapid verification
- Provide cues to help people prepare for action

Some warning methods include:

- Mobilising officers to go round on foot and knock on doors
- Media and social media announcements
- PA announcements in public buildings, shopping centres, sports venues, transport systems, etc.

During situations such as terrorism events, it may not be beneficial to keep people fully informed about the nature of the emergency. Fully informing the crowd of such a warning – i.e. making them aware of a possible terrorist act – rather than simply providing general information about needing to evacuate due to an 'incident', may greatly heighten the crowd's anxiety and serve to create a dangerous situation, with people rushing, pushing and potentially causing crushing, to leave.

For further information, see - Cabinet Office publication - Understanding Crowd Behaviours: Supporting Evidence

Strategic actions

Fire and rescue services should:

- Make arrangements with partner agencies to develop appropriate means and processes to provide warnings, information, instruction and updates during emergency incidents
- Develop guidance and support arrangements to effectively warn, inform, instruct and update people during emergency incidents
- Develop guidance and support arrangements to effectively deal with and use media services

Tactical actions

Incident commanders should:

- Use appropriate means to warn, inform, instruct and update people involved in emergency incidents
- Consider the use of social media and other systems to communicate message to public
- Establish a media liaison point and brief a nominated media liaison officer

Control measure - Plan reception centres

Control measure knowledge

Depending on the scale and nature of the incident, suitable locations and logistics for the safe reception of large numbers of people may need to be identified and arranged. Reception centres in the form of survivor reception centres, emergency rest centres and humanitarian assistance centres are designed to cater for the needs of all casualties and other victims.

Experience has shown that in the immediate aftermath of an incident many people will travel to the scene or to meeting points, such as travel terminals, if they believe their family or friends may have been involved in an emergency. Friends and relatives who may be feeling intense anxiety, shock or grief, need a sympathetic and understanding approach. Appropriate and effective liaison and control must be in place to ensure that information is accurate, consistent and non-contradictory.

Local authorities work with statutory and specialist agencies and the voluntary sector who can provide additional specialist assistance at a large scale incident or one which requires additional logistical and public support. Such agencies include:

- Voluntary Sector Civil Protection Forum
- Red Cross — emergency response
- Disaster Action
- Salvation Army Trust
- Samaritans
- St. John Ambulance / St. Andrews Ambulance (Scotland)
- Royal Voluntary Service — formerly Women's Royal Voluntary Service

For further information, see: Emergency Response and Recovery Non statutory guidance accompanying the Civil Contingencies Act 2004

Strategic actions

Fire and rescue services should:

- Make appropriate arrangements with local authorities and partner agencies for pre-planned public reception centres as part of the community risk assessment
- Develop local guidance and appropriate arrangements on the available support services for people affected by emergency incidents
- Ensure that incident commanders have an understanding of the processes and arrangements for local emergency public support services

Tactical actions

Incident commanders should:

- Carry out early liaison with partner agencies on the establishment of reception centres
- Instigate local arrangements for emergency public support services

Incident closure and handover – Preparing for redeployment

Hazards and control measures about the final stages of an incident including make-up, closure and handover.

Hazard – Closing an incident too early

Hazard	Control measures
Closing an incident too early	Clearly defined command roles and responsibilities, incorporating multi-agency arrangements

Hazard knowledge

All operations carried out on the incident ground should aim to achieve the operational objectives specific to the incident type, using prescribed techniques and procedures in accordance with the tactical plan. They should achieve the strategic aims of the level of command in operation. Decision making at incidents will either be the responsibility of the incident commander, at smaller type incidents, or as part of a joint decision in conjunction with other agencies in attendance, incorporating all of the applicable policies and procedures.

At all incidents the incident commander must focus on safety and effectively resolving the incident. They must work at a tactical level, in conjunction with other services and agencies as necessary, to ensure a return to a normal or steady state as soon as practicably possible. Nonetheless, if the incident commander fails to undertake an accurate and appropriate assessment of the situation, an inaccurate dynamic and analytical risk assessment may be drafted. This may lead to an inappropriate operational plan being executed, failing to recognise the vision of what a normal or steady state looks like. Such actions may ultimately lead to the fire and rescue service resources leaving the incident too early, with hazards remaining unaddressed.

Fire and rescue services need to be aware that attendance at an incident may have been requested by other emergency agencies. On such occasions, while the role of the fire and rescue service will not be of 'primacy' for the incident as a whole, this does not mean the incident commander should not ensure the correct incident command protocols are applied throughout the incident.

Control measure – Clearly defined command roles and responsibilities, incorporating multi-agency arrangements

See National Operational Guidance: Incident command

See JESIP Joint Doctrine: The Interoperability Framework

Hazard – Relaxation of command and control during 'make up' operations

Hazard	Control measures
Relaxation of command and control during 'make up' operations	Follow safe person principles Clearly defined command roles and responsibilities, incorporating multi-agency arrangements Incident ground safety management

Hazard knowledge

Personnel must not become complacent in the closing stage of an incident. The process of task and hazard identification, assessment of risk, planning, organisation, control, monitoring and review of preventive and protective measures must continue until the last appliance leaves the incident ground. There are usually fewer reasons for accepting risks at this stage because there are fewer benefits to be gained from the tasks being carried out. Officers should, therefore, have no hesitation in halting work to maintain safety.

Control measure – Follow safe person principles

Control measure – Clearly defined command roles and responsibilities, incorporating multi-agency arrangements

See National Operational Guidance: Incident command

Control measure – Incident ground safety management

Control measure knowledge

See National Operational Guidance: Incident command

Strategic actions

Fire and rescue services should:

- Ensure they apply industry best practice when formulating their operational policies and procedural guidance on safety management

Tactical actions

Incident commanders should:

- Ensure that effective supervision of operational activity is maintained until the conclusion of the incident

Hazard – Failure to make resources ready for redeployment or otherwise before leaving the incident ground

Hazard	Control measures
Failure to make resources ready for redeployment or otherwise before leaving the incident ground	Communicate the availability of resources Consider welfare Ensure effective organisation of the incident ground Manage, inspect and test equipment Wear personal protective equipment (PPE)

Hazard knowledge

The responsibilities of the incident commanders in relation to managing operational resources, including personnel, does not end when the incident is in its 'closing stage'. All equipment used at the incident will need to be accounted for, made up and, on return to the station, either need to be replenished or be subjected to the necessary testing requirements before being made fully operational again.

Communication between the commander of appliances, crew members and control is essential throughout this phase to ensure all parties have knowledge of the operational status of appliances and crews before leaving the incident ground. Failure to communicate could result in service control incorrectly deploying the appliances and crew members to further incidents for which they are inappropriately equipped.

Effective communication is important at all incidents. Accurate information should pass between the incident commander, crews and service control. The incident commander also has a duty to make sure messages and information are passed to service control. This ensures they maintain and record an accurate picture of an incident and the availability of operational resources.

Control measure – Communicate the availability of resources

Control measure knowledge

Incident commanders should consider whether appliances can remain at the incident ground, whilst being available for deployment to other incidents. This decision should be made following a risk assessment and service control informed of any availability status change. The crew of available appliances at incidents should be informed and deployed only in accordance with current status.

Fire control will generally have a more accurate interpretation of the availability of resources across the service than personnel attending operational incidents. Information on the availability or commitment of resources will support fire control in determining covering moves or the reallocation of resources from one incident to another.

The decision to release resources should consider operational priorities and consider the length of time crews have been deployed at the incident and their roles.

Strategic actions

Fire and rescue services should:

- Ensure that operational procedures identify safe systems of work for the status, availability and redeployment of appliances and resources.

Tactical actions

Incident commanders should:

- Regularly update fire control on the availability status of appliances and other resources
- Consider whether appliances can be released from the incident considering the incident plan and control measures

Fire control operators should:

- Identify the availability of appliances, personnel, equipment and other resources when considering redeployments

Control measure – Consider welfare

Control measure knowledge

See National Operational Guidance: Operations – Health, safety and welfare

Control measure – Ensure effective organisation of the incident ground

See National Operational Guidance: Incident command

Control measure – Manage, inspect and test equipment

Control measure knowledge

At the conclusion of an incident appliances and equipment should be returned to operational readiness with appropriate speed. Operational equipment should be inspected and tested according to service policy and any test results must be recorded. Cleaning of equipment should be completed and the appliance should be fully restowed. Where appropriate, any defective equipment should be clearly marked and, where necessary, removed from use.

Any equipment defects or deficiencies should be recorded, before leaving the incident ground and, where appropriate, fire control should be informed. The appliance commander is responsible for all crew members and equipment stowed on their appliance.

See Fire and Rescue Authorities, Health, safety and welfare framework for the operational environment Section 5, Formulating Health and Safety Policy for the Operational Environment, sub section 5.1, paragraph 3, Arrangement for procuring and maintaining operational equipment / plant Page 12-13.)

(Fire Service Manual, Volume 1, Fire Service Technology, Equipment and Media, Inspection and Testing of Equipment, Chapter 3: Inspection, Testing and Maintenance, sub section 3.4 – 3.17.2)

Strategic actions

Fire and rescue services should:

- Have procedures for the post incident inspection and maintenance of operational appliances, equipment and other resources

Tactical actions

Appliance commanders should:

- Ensure equipment receives appropriate after use inspection and testing before changing availability status

Control measure – Wear personal protective equipment (PPE)

Control measure knowledge

When PPE has become dirty, contaminated or damaged it may not perform to the standard required by the appropriate specification. PPE should only be worn if it is good condition and has been subject to appropriate cleaning and testing processes.

Strategic actions

Fire and rescue services should:

- Have suitable arrangements for the cleaning and maintenance of PPE in accordance with manufacturer's instructions.
- Ensure that there are suitable arrangements to support the replenishment of PPE

Tactical actions

Incident commanders should:

- Consider the condition and serviceability of PPE when assessing operational readiness for redeployment

Hazard - Failing to leave the incident ground in a safe state

Hazard	**Control measures**
Failing to leave the incident ground in a safe state	Make an effective handover to the responsible person Consider community recovery

Hazard knowledge

At the closing stages of the incident the responsibility for the health and safety of the site must be handed over to the appropriate person. The reference to a 'safe state' does not imply that hazards no longer exist but that interim or permanent control measures are in place to manage them. Knowledge of these should be handed over to the person responsible for their future management. Failure to do so will leave the hazards on the incident ground unmanaged and unknown, resulting in the potential for accident and injury to others.

Control measure – Make an effective handover to the responsible person

Control measure knowledge

Competent management of the closure of the incident is just as important as the initial actions of an incident commander on arrival. This includes:

- Facilitating proper handovers as the incident reduces in size
- Continued vigilance regarding the hazards that continue to exist or newly emerge
- Ensuring that site occupiers, neighbours and others who have been affected by the incident are kept appropriately informed

At the closure of the response phase to some operational incidents, residual hazards may exist that could cause harm to others if not properly managed. There may be control measures implemented by the fire service to reduce risk that will need to be maintained post incident. These could include immediate threats to safety, security of premises or environmental risks.

At some incidents a responsible person or body will be present to whom the management of these risks can be transferred. The risks may have a wider impact on the public or occupiers of neighbouring premises. There could also be no obvious way of maintaining control measures after fire service resources leave the incident.

Where there is a responsible person or body a formal handover of responsibility for the management of risk should be undertaken and a record made; this record may include the following:

- Responsible person's details and time and date of the handover
- Identification of hazards and measures to ensure health and safety arrangements are maintained
- Security issues, particularly where premises are left vulnerable, and the need to communicate with persons accepting responsibility
- Logging decisions made by the incident commander
- Formal acceptance of responsibility by the responsible person

The fire service may need to secure the personal effects and valuables of persons involved in the incident and ensure that these are handed over to the appropriate authorities. A record should be made of items recovered by the fire service and to whom these were handed prior to leaving the incident.

See National Operational Guidance: Incident command

See Joint Doctrine: The Interoperability Framework, Joint Decision Making model

Strategic actions

Fire and rescue services should:

- Have procedures for handing over responsibility for the safe management of incidents to a responsible person or body
- Have procedures to secure premises and maintain control measures at incidents where no responsible person can be identified

Tactical actions

Incident commanders should:

- Ensure that hazards are identified to the responsible person when handing over responsibility for safety management
- Report any safety critical issues to every person affected by the incident before leaving the scene
- Take measures to secure premises where no responsible person can be identified

Control measure - Consider community recovery

Control measure knowledge

Supporting communities in the recovery phase of an incident is a key consideration for fire and rescue services whether this involves individuals, families or has a wider impact. The recovery phase should begin at the earliest opportunity following the onset of an emergency, running in tandem with the response to the emergency. Services should work with local partner agencies to develop protocols for the instigation of community recovery arrangements. Incident commanders should consider what actions can be taken to promote community recovery before leaving the incident and refer people involved to appropriate agencies.

See Emergency response and recovery: Non statutory guidance accompanying the Civil Contingencies Act 2004

Strategic actions

Fire and rescue services should:

- Work with local partner agencies to develop procedures for instigating community recovery protocols
- Have procedures to support incident commanders in identifying agencies that can promote community recovery

Tactical actions

Incident commanders should:

- Liaise with LRF partner agencies at the earliest opportunity
- Consider community recovery protocols and arrange appropriate assistance prior to leaving the incident

Hazard - Failing to identify and communicate learning opportunities

Hazard	Control measures
Failing to identify and communicate learning opportunities	Carry out post incident investigations Hold debriefing or post-incident reviews

Hazard knowledge

Effective communication is of critical importance at all stages of an incident. The incident commander must establish effective arrangements for communication. Information is one of the most important assets on the incident ground, gathered not just in support of the immediate operational management of the incident but also in support of debriefing and post-incident reviews. The needs of other agencies should be considered where appropriate in this process.

Fire and Rescue Authorities, Health, safety and welfare framework for the operational environment Sections 7.3, 8.1 and 12)

Control measure – Carry out post incident investigations

Control measure knowledge

At any time during and after an operational incident there may be the need to carry out some form of investigation. This may be as a result of an adverse health and safety event, suspected criminal activity or a statutory body carrying out their duties. The range of investigations could include:

- Fire investigation
- Health and safety event investigation e.g. accident, near miss/hit, cause for concern
- Criminal investigation
- HSE
- Environment agency
- Local authority
- Transport enforcing authorities, e.g. AIB
- Attendance at coroner's court (or equivalent)

Accurate records should be kept following the conclusion of the incident as these may be required as evidence in legal proceedings.

Strategic actions

Fire and rescue services should:

- Have policies and procedures for post incident investigations and the preservation of evidence
- Provide crews with appropriate information and training on post incident investigations

Tactical actions

Incident commanders should:

- Consider the preservation of evidence where future investigation is likely
- Instigate and co-operate with post incident investigations where necessary

Control measure – Hold debriefing or post-incident reviews

Control measure knowledge

Debriefing, also referred to as post incident review, can be formal or informal. Debriefing can range from 'hot debriefs', which occur at the incident before crews leaving, to large multi-agency debriefs or a public inquiry following major incidents. They are an important part of improving personal and organisational performance. They should take place whenever there is an opportunity to improve service delivery. Active monitoring during an incident can inform and support this process.

Debriefing forms an essential part of the management of health and safety on the incident ground. Debriefing will identify any significant information or lessons learned, and whenever possible, the incident commander should debrief crews prior to leaving the incident. Equipment, PPE, systems of work and training can all be improved as part of this performance management system. HSG 65 –

Successful Health and Safety Management gives further guidance on the principles of effective health and safety management in the workplace.

Debriefs should be used to review the performance of individuals and teams against relevant standards with effective performance and meritorious conduct being acknowledged where appropriate. Debriefs can be used to highlight any unconventional system or procedures used that were successful or made the working environment safer. The recording, monitoring and review of incident debriefs and the outcome of investigations can support the identification of trends to support future learning.

Consider whether existing information held about a premises or location should be reviewed, or whether there is a need to add a new premises or location into future pre-planning, for example, by adding to a visit or an inspection programme

Managing for health and safety (HSG65), HSE 2013

Joint Doctrine: The Interoperability Framework, Part 1, Annexe A, Page 6, Para 8, Joint Learning

Fire and Rescue Authorities, Health, safety and welfare framework for the operational environment Section 4,7.1, 7.2, 10.1, 10.2, 10.3 and 12)

Strategic actions

Fire and rescue services should:

- Have post incident debriefing procedures suitable to a range of incident sizes that consider multi agency involvement and fire control at all levels
- Have procedures which capture and share operational learning and instigate changes to risk information, policy, procedures, equipment, PPE and training, as applicable
- Effectively communicate lessons learned from debriefs to all personnel

Tactical actions

Incident commanders should:

- Conduct a structured debrief at a level appropriate to the size of the incident
- Record and share significant findings from incident debriefs

Glossary

Term	Acronym	Description
Analytical Risk Assessment	ARA	A more detailed risk assessment process than Dynamic Risk Assessment.
Appliance		Generic term for fire service emergency response vehicle other than a light goods vehicle.
Automatic Vehicle Location System	AVL, AVLS	Technology which allows the location of a vehicle to be monitored remotely.

Term	Acronym	Description
Biological hazards		Biological hazards are hazards that involve living things, whether they come from people, animals, or plant.
Call Challenging		Further questioning a caller from call handling information received that may be ambiguous or misleading.
Call Filtering		Call assessing to establish if an attendance is required.
Call Handling Agency	CHA	Provides an emergency call service for communications providers (CP's) to all emergency authorities. In the UK BT acts as our CHA for all the networks.
Call Line Identification	CLI	Instantly gives the control room operator location information details which may be used as a guide to the potential location of an emergency.
Category 1 responder	Cat 1	Organisations at the core of the response to most emergencies (the emergency services, local authorities, NHS bodies). Category 1 responders are subject to the full set of civil protection duties.
Category 2 responder	Cat 2	Organisations (the Health and Safety Executive, transport and utility companies) are 'co-operating bodies'. They are less likely to be involved in the heart of planning work, but will be heavily involved in incidents that affect their own sector. Category 2 responders have a lesser set of duties - co-operating and sharing relevant information with other Category 1 and 2 responders.
Chemical hazards		The term chemical hazard refers to liquids, gases or solids that can harm people, other living organisms, property, or the environment.
Communication Providers	CPs	A telephone service provider for either exchange lines or mobile phones.
Community Risk Register	CRR	Local Register/Assessment of the likelihood and potential impact of a range of different civil emergency risks (including naturally and accidently occurring hazards and malicious threats) that may directly affect the unique characteristics of each area.
Control Room Operator	CRO	Is experienced person who receives emergency calls, mobilises resources and actions incident command requests.
Defensive mode		Employed by incident command when the risks outweigh the benefit. No matter how many additional control measures are or could be adopted, the risk is too high. Therefore, operations

Term	Acronym	Description
		continue outside of an identified hazard area.
Direct Electronic Incident Transfer	DEIT	Information can be transferred electronically to various agencies instantaneously providing a clear understanding of assistance required.
Drive to Arrive		Technique of driving within safe limits whilst making maximum progress.
Duplicate Call		More than one call received for an incident allowing the control room operator to record additional information on the incident log for attending resources.
Dynamic Risk Assessment	DRA	A risk assessment process that is used in a dynamic environment.
Emergency Call Management	ECM	The ECM protocol offers a generic system for the successful management of emergency calls based on the principle that an emergency call can be dealt with in three distinct stages.
Equipment or Tool Dump		An area created to store equipment or tools during an incident.
Enhanced Information Service for Emergency Calls	EISEC	Instantly gives the control room operator location information details which may be used as a guide to the potential location of an emergency.
Fire Control Room		A mobilising centre for all emergency call handling management undertaken by the fire and rescue service.
Graphical Information System	GIS	A computer system designed to capture, store, manipulate, and analyse all types of geographical data.
Hard Copy		Maintain a recording of information manually.
Hazardous Materials	HAZMAT	Hazardous materials that can cause harm.
Holding Area		Similar to Strategic Holding area but used for smaller incidents which do not merit a large scale response.
Hot Debrief		A review of the actions and decisions made at an incident. Usually held prior to leaving the incident ground and involving only those in attendance at the time.
Incident		Any event or occurrence which requires an emergency response.
Incident Recording Systems	IRS	A national software system that is led by the Department for Communities and Local Government (DCLG) that enables the data on all incidents attended by the UK Fire and Rescue Service

Term	Acronym	Description
		to be collected electronically, and will provide a nationwide standard of data collection.
Information Management Systems		A general term for software designed to allow the storage, organisation and retrieval of information.
Integrated Risk Management Plan	IRMP	The planning process and subsequent plan for a fire and rescue authority to demonstrate how its strategic direction meets the needs of the community.
Interoperability		The joint working of emergency services, especially during a major or complex incident.
Intra-operability		The joint working of fire and rescue services, through combined use of resources and assets, sometimes in a cross-border situation. This can also mean the combined involvement of a fire and rescue service with National Resilience assets.
Local Resilience Forum	LRF	A requirement under the Civil Contingencies Act 2004: A forum or Multi-agency partnership formed in an individual Police Service boundary consisting of both Category 1 and 2 responders. The LRF aims are to plan and prepare for localised incidents and catastrophic emergencies. They work to identify potential risks and produce emergency plans to either prevent or reduce the impact of any incident on their local communities.
Manual Handling		Manual handling covers a wide variety of activities including lifting, lowering, pushing, pulling and carrying. If any of these tasks are not carried out appropriately there is a threat of injury.
Make Up		Phase of an incident where all equipment is replaced on the appliance and the appliance is prepared for deployment to another incident.
Mobile Data Terminal	MDT	Provide mobile computer access to information, usually in the form of a rugged laptop.
Mobilisation		Actions that contribute to informing a fire and rescue service asset that it is required to proceed to an incident and the process of that asset proceeding to the incident.
Multi Agency Incident Transfer	MAIT	Information can be transferred electronically to various agencies instantaneously providing a clear understanding of assistance required.

Term	Acronym	Description
National Occupational Standards	NOS	National Occupational Standards (NOS) are statements of the standards of performance individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding.
Personal Protective Equipment	PPE	Personal protective equipment includes items such as fire tunics, over-trousers, helmets, fire hoods, gloves and boots. Specialist personal protective equipment may be used for certain types of incident.
Physical hazards		Physical hazards occur when objects such as equipment and tools, or areas of the working environment come into contact or have an effect on a person, resulting with the potential to cause actual physical injury.
Pre-determined Attendance	PDA	Information display format on the mobilising system showing the correct resource type which may be dispatched to an incident or location.
Premise based gazetteer		A data base within a mobilising system that displays address information when imputing emergency call handling information.
Prompt Call Information		Information on various call type scenarios to support fire control room operators when giving advice to a caller. These can also aid resources when proceeding and in attendance at incidents.
Protective Marking Framework		The Government's administrative system to ensure that access. to information and other assets is correctly managed and safeguarded to an agreed and proportionate level throughout their lifecycle, including creation, storage, transmission and destruction. The system is designed to support HMG business, and meet the requirements of relevant legislation, international standards and international agreements.
Psychological hazards		Relating to, or arising from the mind or emotions. Influencing or intended to influence the mind or emotions.
Public Emergency Call Services	PECS	Written code of practice between communications providers (CP's), call handling agencies and the emergency authorities.
Responsible Person		The Fire Safety Order details the duties of a Responsible Person for carrying out a fire risk assessment and ensuring the building is suitably safe for all relevant persons.

Term	Acronym	Description
Retained Duty System	RDS	The employment of personnel on an 'on call' only basis.
Risk Information		Information which relates to specific premises or groups of premises which enhances the safety of crews attending an incident.
Road Traffic Collision	RTC	The law defines a reportable road traffic collision as an accident involving a mechanically-propelled vehicle on a road or other public area.
Safe Person concept		The combination of training, PPE and work systems which contribute to working safely.
Safety Officer		Safety officers are appointed by the incident commander prior to commencement of operations. They will be located at points which provide them with overall view and control of the inner cordon and scene of operations.
Salutations		Correct acknowledgment to support a caller through emergency call management.
Sector		A designated area within the area of operations at an incident.
Site Specific Risk Information	SSRI	Risk information is captured by each fire and rescue service to identify, through a continuous process, new risk information and the updating of existing information to support the operational effectiveness of the fire and rescue service, ensure the safety of the public and the protection of its firefighters.
Situational awareness		The perception and understanding of a situation and the anticipation of how the situation may develop in the near future.
Spate		A period of high numbers of calls to different but usually related incidents.
Spans of Control		Collation of information being received and actioned in a safe working environment.
Spike		Localised influx of emergency calls with no given warning.
Standby		A replacement resource or equipment available to use to maintain fire ground cover or fire control room operations.
Stand-Down procedures		Method for ensuring appliances can be released from a call before arrival at the incident.
Subject Matter Expert	SME	An individual who exhibits the highest level of expertise in

Term	Acronym	Description
		performing a specialized job, task, or skill in the organisation.
Turnout System		System for making firefighters aware that they are required to attend an incident.
Welfare		Welfare is the provision of well-being and social support facilities.
Zoonosis		An infection transmissible between vertebrate animal hosts and humans.

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