Control measure -
Risk assessment at an incident

Control measure knowledge

An incident ground is an operational workplace and the law requires fire and rescue services to assess and reduce the risk to personnel as far as is reasonably practicable. As well as this duty of care to fire and rescue personnel, there is also a duty to safeguard others.

An incident commander's objective is to resolve the incident with minimal impact to the community, to prevent or minimise harm to people and the environment. Incident commanders must establish a safe working area as soon as is practicable.

To ensure a safe working environment they will need to:

- Select the most appropriate control measures
- Consider the benefits of proceeding with actions taking account of the risk
- Take into account any time constraints

Safe systems of work must be put in place. Firefighters must ensure they develop, maintain and review these systems throughout the incident. To perform an effective risk assessment, incident commanders should understand the following concepts:

- Hazard: An event or situation with the potential to cause death or physical or psychological harm, damage or losses to property, and/or disruption to the environment and/or to economic, social and political structures
- Risk: Measure of the significance of potential harm in terms of its assessed likelihood and impact
- Control measure: Measures to reduce the likelihood of exposure to a hazard from a given risk, and/or reduce the impacts of that exposure. The [HSE hierarchy of risk control measures](#) gives further examples of how control measures can be applied at an incident

Risk assessment at incidents breaks down into a number of parts.

Dynamic risk assessment

The term dynamic risk assessment (DRA) describes the assessment of risk in a rapidly changing environment at an incident where decisions are sometimes made in fast-moving situations, with incomplete or inaccurate information. It is a process not a control measure.

The outcome of the dynamic risk assessment will contribute to the incident commander's
operational plan. It helps to inform whether crews should be operating in the risk area. This in turn determines the tactical mode.

Analytical risk assessment

As the incident progresses or becomes more complex it requires a more detailed and formal record of the significant findings of the risk assessment. The fire and rescue service call this analytical risk assessment (ARA).

Personal (or individual) risk assessment

Personal (or individual) risk assessment helps firefighters remain safe when working unsupervised, which is derived from the document Health, safety and welfare framework for the operational environment.

Tactical modes

Communication of the tactical mode is a way of recording a decision by the incident commander on the completion of their risk assessment and determination of the incident plan. It indicates the decision by the commander whether to deploy crews in the hazard area or not. All incidents require tactical modes to be declared at the earliest opportunity following arrival at an incident and at regular intervals thereafter. Where sectors are in place, a tactical mode for each sector is required.

The hazard area is an area in which significant hazards have been identified by the relevant commanders. The hazard area may extend beyond the boundaries of the immediate scene of operations and in some cases can move or change during the incident.

Declaration of the tactical mode at any given point of the incident describes the current level of risk exposure to operational personnel. There are two tactical modes of operation; offensive and defensive.

• Offensive mode: Crews are in the designated hazard area and thereby exposed to greater risk
• Defensive mode: Crews are outside of the designated hazard area

There is no default tactical mode. The incident commander should decide their incident plan and associated operational tactics following their risk assessment and application of the Decision Control Process. The selection of a tactical mode is a conscious decision underpinned by a clear rationale. This is key to assertive, effective and safe incident command delivered by competent incident commanders, and the avoidance of risk aversion and decision inertia.

Incident commanders should make sure everyone on the incident ground is aware of the tactical mode. They should communicate this at regular intervals and when it changes. It is also essential that fire control rooms are informed of the current mode to ensure it is recorded. All messages should include sufficient information regarding the findings of the risk assessment. See The Foundation for Incident Command.

Offensive mode
This is where fire service personnel are working in the hazard area and exposed to greater risk, because the incident commander has decided it is appropriate following their risk assessment. This may apply to an individual sector or to the whole incident when every sector is in offensive mode.

Offensive mode is likely to be the common mode of operation.

Defensive mode

This is where commanders deal with an incident from a defensive position. In defensive mode, the identified risks are intolerable and outweigh the potential benefits. No matter how many extra control measures could be put in place at that particular time, the risks remain too great to commit crews into the hazard area. It does not indicate that no operational activity is taking place.

Defensive mode indicates that crews are not working in the hazard area.

There will be circumstances where having been in defensive mode, the risk has changed, tactical priorities have been revised or additional control measures are available. This may mean it is acceptable to enter or re-enter the hazard area. In this case, as crews are committed, the tactical mode will change to offensive.

Change in tactical mode

There will be occasions when it is necessary to change the tactical mode following revision and updating of the risk assessment. This change may be on receipt of new information, a change in tactical priorities or a revision of control measures.

When the decision is made to commit crews into the hazard area and defensive operations are in place, the tactical mode for the incident or sector will change to offensive as preparations are being made to enter the hazard area.

When it is necessary to change from offensive to defensive mode following the outcome of the risk assessment, the commander should announce and implement the withdrawal of crews or personnel from the hazard area. The use of tactical withdrawal or emergency evacuation should be included in communicating the change in mode to the incident ground and fire control room. The tactical mode does not change until all fire and rescue service personnel have withdrawn from the hazard area.

There are a number of reasons why the change to defensive mode does not take place until after fire and rescue service personnel have left the hazard area. It may be because personnel will still be in the hazard area and it may take some time to withdraw, for example at high rise and large or complex structures. There may also be a need to commit crews to assist with the tactical withdrawal or emergency evacuation, to relay messages, protect escape routes or rescue colleagues.

The terms tactical withdrawal or emergency evacuation should be used in the message to fire control to time stamp the decision of the incident commander's dynamic risk assessment. Radio messages should be timely, without detracting from risk-critical operations, and include sufficient information demonstrating the need to change to defensive mode.
At certain incidents, other responders may continue to work in the hazard area, for example at a CBRN (E) incident.

Tactical modes in sectors

When the incident has been divided into sectors the incident commander remains responsible for the tactical mode at all times. There will be occasions when an operations commander has been appointed. Whilst they may determine or approve a change in tactical mode, the incident commander still retains overall responsibility.

When more than one sector is in use:

- When every sector is in offensive mode, the overall mode of the incident is offensive
- When every sector is in defensive mode, the overall mode of the incident will be defensive
- When different modes are in use at the same incident, there is no overall mode for the incident, for example, when two sectors are in offensive mode and one sector is in defensive mode. All messages to fire control room or across the incident ground should list each sector and the mode it is in, for example. "Sector 1 offensive mode, Sector 2 offensive mode, Sector 4 defensive mode."

Where appropriate, incident commanders should confer with sector commanders when making a decision to change the tactical mode. Sector commanders should be confident in recommending changes to the tactical mode to the operations or incident commander. When a change in mode occurs all personnel should be informed.

If a sector commander wishes to commit personnel into the hazard area, i.e. change to offensive mode when the prevailing mode is defensive, they should seek permission from the incident or operations commander. They should not make any change until they have received permission.

Where a rapid change in circumstances occurs, the sector commander should revise the risk assessment. There may be occasions when they need to act first in the interests of safety and then inform the incident commander of their decision.

**Strategic actions**

Fire and rescue services must:

- Have policies and procedures for assessing risk to personnel on the incident ground. These should outline how the risk assessment should be carried out, by whom and the method of recording significant findings.

Fire and rescue services should:

- Have procedures for deciding and implementing tactical modes following a risk assessment.

**Tactical actions**

Incident commanders must:
• Carry out a dynamic risk assessment, identify hazards, evaluate risk and implement safe systems of work

• Identify and communicate the hazard area and establish a safe working area as soon as is practicable

• Continually review the risk assessment using situational awareness gathered from active monitoring as the incident progresses

Incident commanders should:

• Declare the tactical mode and communicate to all personnel and fire control

• Review the tactical mode following active monitoring and briefings with sector commanders

• Communicate any change in the tactical mode of a sector of the incident to all personnel

• Instigate a tactical withdrawal of personnel when the mode changes from offensive to defensive

• Instigate the completion of an analytical risk assessment and record significant findings

• Communicate findings of analytical risk assessment to all personnel and other agencies

• Periodically review the analytical risk assessment using situational awareness from active monitoring

• Ensure that all personnel are briefed on the current hazards, risks, control measures and tactical mode

All personnel should:

• Recommend changes in tactical mode to the operations or incident commander
• Seek permission from the incident or operations commander before committing personnel into the hazard area