



National
Operational
Guidance

Hazard

Unstable or collapsed structure



NFCC
National Fire
Chiefs Council

Developed and maintained by the NFCC



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Hazard - Unstable or collapsed structure

Knowledge and understanding

Hazard	Learning outcome
Unstable or collapsed structure	Understand all associated hazard knowledge



Control measure - Cordon controls: Unstable or collapsed structures

TRAINING SPECIFICATION

Knowledge and understanding

Control measure element	Learning outcome
Cordon controls: Unstable or collapsed structure	Understand: <ul style="list-style-type: none">• The factors that will influence cordon distance for unstable structures, including:<ul style="list-style-type: none">- Construction materials- The height and type of structure- Weather conditions – current and predicted- The potential damage to surrounding structures and infrastructure<ul style="list-style-type: none">- Scaffolding and tower cranes- Glass, particularly in windy conditions• The behaviour of portal or rigid frame structures when they collapse• Who can provide specialist advice and assistance when establishing cordons at incidents involving unstable structures



Practical application

Control measure element

Learning outcome

Evaluate and monitor the potential footprint of collapse and debris

Demonstrate the ability to:

- Gather information to support the evaluation and monitoring of the potential footprint of collapse and debris
- Identify the appropriate cordon distance for unstable or collapsed structures
- Establish cordons, considering potential collapse of structures or equipment

Consider seeking specialist advice when defining the hazard area for an unstable or collapsed structure

Demonstrate the ability to:

- Seek specialist advice when defining the hazard area for an unstable or collapsed structure
- Consider the specialist advice when establishing cordons for unstable structures

Consider the impact of current or predicted weather conditions on the unstable or collapsed structure when establishing cordons

Demonstrate the ability to:

- Obtain predicted weather information
- Consider the impact of weather on the unstable or collapsed structure and be prepared to revise cordons during the incident



Control measure - Assess and monitor structural stability

TRAINING SPECIFICATION

Knowledge and understanding



Control measure element

Learning outcome

Assess and monitor structural integrity

- Understand:
- The types of structural design and construction materials (to an appropriate level)
 - What factors to consider when assessing structural stability:
 - Age, design and condition of the structure
 - Structural materials and construction methods
 - How to determine and monitor the hazard area
 - The need to consider secondary collapse and falling debris
 - The need for early assessment
 - The need for specialist advice
 - Who can provide specialist advice
 - How to recognise signs of collapse
 - The need for:
 - Committing the minimum number of personnel
 - Emergency procedures to be put in place
 - Marking safe routes, exposed elements or other hazards

Practical application

Control measure element

Learning outcome

Identify the age, design and condition of the structure

- Demonstrate the ability to:
- Consider the age, design and condition of the structure

Identify the type of structural materials and construction methods

- Demonstrate the ability to:
- Consider the structural materials and construction methods

Assess and continuously monitor the structure for signs of collapse

- Demonstrate the ability to:
- Assess and monitor the structure for signs of collapse



Control measure element

Learning outcome

Assesses and monitor the suitability of the structure for working in the hazard area

Demonstrate the ability to:

- Assess structural stability
- Consider the suitability of the structure for working in the hazard area

Consider the potential impact of an unstable or collapsed structure on surrounding structures and infrastructure

Demonstrate the ability to:

- Consider the potential impact of an unstable or collapsed structure on surrounding structures and infrastructure

Ensure the minimum number of personnel work in the hazard area for an unstable or collapsed structure

Demonstrate the ability to:

- Control the number of personnel in the hazard area

Have emergency arrangements in place for unstable or collapsed structures

Demonstrate the ability to:

- Establish emergency arrangements before committing personnel to the hazard area

Consider appointing an external safety officer to monitor structural stability

Demonstrate the ability to:

- Consider appointing and briefing an external safety officer to monitor structural stability

Consider requesting structural advice, assessment and monitoring from appropriate agencies

Demonstrate the ability to:

- Seek assistance from appropriate specialist resources to provide:
 - Structural advice
 - Assessment of structural stability
 - Monitoring of structural stability



Control measure - Use of structural monitoring equipment



TRAINING SPECIFICATION

Knowledge and understanding

Control measure element

Learning outcome

Use of structural monitoring equipment

Understand:

- The benefits of using structural monitoring equipment to monitor ground movement
- Who is able to carry out structural monitoring
- Why there may be delays in sourcing and implementing structural monitoring

Practical application

Control measure element

Learning outcome

Consider requesting structural monitoring equipment in consultation with USAR tactical advisers or other specialists

Demonstrate the ability to:

- Request the use of structural monitoring equipment from:
 - USAR tactical advisers
 - Other specialists