National Operational Guidance

Hazard

Unstable or collapsed natural or built environments

NFCC National Fire Chiefs Council

Developed and maintained by the NFCC

Contents

Hazard - Unstable or collapsed natural or built environments

Knowledge and understanding

Hazard	Learning outcome
Unstable or collapsed natural or built environments	Unstable or collapsed natural or built environments

Control measure - Cordon controls: Unstable or collapsed natural or built environments

TRAINING SPECIFICATION

Knowledge and understanding

Control measure element	Learning outcome
Prevent collapse or further collapse of an unstable surface, trench excavation or other natural or built environment	Understand: • The importance of ensuring fire and rescue service activity does not worsen the unstable or collapsed natural or built environment
Limit equipment being taken into the hazard area	Understand: • What equipment should be allowed into the hazard area
Identify an area away from the hazard area to locate personnel, equipment, machinery and any items being removed including debris	Understand: • The need to limit the weight, load and movement in the hazard area

Control measure element	Learning outcome
Isolate or move vehicles, machinery or equipment that could create vibration	Understand: • The need to minimise any vibration to the ground • The need to consider the impact of moving vehicles, machinery or equipment to the surrounding area

Practical application

Control measure element	Learning outcome
Establish cordon controls for an unstable or collapsed natural or built environment at an appropriate distance from the hazard area	Demonstrate the ability to: • Establish appropriate cordons to control access to the area surrounding an unstable or collapsed natural or built environment
Identify an appropriate area to locate equipment, personnel and debris to prevent further collapse of an unstable natural or built environment	Demonstrate the ability to: • Locate fire and rescue service equipment and personnel appropriately
Consider isolating, controlling or moving vehicles, machinery or equipment for incidents involving an unstable or collapsed natural or built environment	Demonstrate the ability to: • Appropriately isolate or move machinery, vehicles and equipment • Carry out a risk assessment to take into account the impact of moving vehicles, machinery or equipment before doing so • Request that vehicles, machinery or equipment are safety moved

Control measure - Safe system of work: Unstable or collapsed natural or built environments

TRAINING SPECIFICATION

Knowledge and understanding

Control measure element	Learning outcome
What activities a fire and rescue service may need to carry out for an unstable or collapsed natural or built environment	Understand: • The types of activity that may be required • The precautions that may need to be taken
Assessing an unstable or collapsed natural or built environment	Understand: • The need for early assessment • The need for specialist advice • Who can provide specialist advice • The need to look for signs of collapse
Precautions to take before committing personnel if the support system has been compromised	Understand: • The need to liaise with the responsible person or a competent person to determine a safe system of work • The need to minimise the number of personnel committed to the hazard area
Consider additional hazards	Understand: • The incident may also involve: - Working at height - Working near unguarded edges - Working in confined spaces - Restricted access and egress • The hazards presented by additional loading to the area

Practical application

Control measure element	Learning outcome
Avoid applying additional loads to the opening, such as fire and rescue service vehicles, equipment and personnel	Demonstrate the ability to: Appropriately locate fire and rescue vehicles, equipment and personnel
Consult with the responsible person or competent person to establish a safe system of work for an unstable or collapsed natural or built environment	Demonstrate the ability to: • Establish a safe system of work using information obtained from the responsible person or competent person
Consider requesting specialist advice regarding unstable or collapsed natural or built environments	Demonstrate the ability to: • Request appropriate specialist advice
Identify the type of material being excavated and the height and angle of an excavated face	Demonstrate the ability to: • Consider the properties of an excavation
Have emergency procedures in place for unstable or collapsed natural or built environments	Demonstrate the ability to: • Establish emergency procedures before committing personnel to the hazard area
Ensure that minimum numbers of personnel work in the hazard area	Demonstrate the ability to: • Control the number of personnel in the hazard area
Assess and continuously monitor the hazard area for signs of further collapse of an unstable or collapsed natural or built environment	Demonstrate the ability to: • Monitor the hazard area for signs of further collapse
Consider spreading the load of equipment or personnel to reduce the pressure on the opening	Demonstrate the ability to: • Risk assess and consider spreading the load of equipment or personnel • Be aware that early signs of collapse may be hidden by materials used to spread the load

Control measure - Shoring

TRAINING SPECIFICATION

Knowledge and understanding

Control measure element	Learning outcome
Shoring	Understand: • The benefits of shoring and why shoring elements of structure may be necessary • The need for shoring operations to be carried out by competent personnel • When improvised shoring methods may be considered • The considerations and actions prior to using on-site resources for shoring • The need to monitor and assess shoring throughout the incident

Practical application

Control measure element	Learning outcome
Consider requesting specialist advice and resources for shoring	Demonstrate the ability to: • Assess the structural stability of the working environment to ascertain the need for shoring • Identify and request the support of additional resources and specialist advisers to aid shoring • Provide sufficient protection from secondary collapse so operations may proceed
Ensure the competent person for shoring continually assesses and monitors its effectiveness	Demonstrate the ability to: • Identify the person responsible for continually assessing and monitoring the effectiveness of shoring

Control measure element	Learning outcome
Seek advice or assistance for shoring from the responsible person or competent person	Demonstrate the ability to: • Seek appropriate advice or assistance for shoring