

## Generic USAR Operations

### Scope

This guidance document is meant as a generic aide memoir for Urban Search and Rescue operations conducted in the UK. It details generic safety precautions and control measures that must be in place in order to ensure a safe system of work in structural collapse rescue operations. Specific safety precautions, relating to the use of an item of equipment or the undertaking of a particular activity are contained within the related operational guidance documents.

Specific guidance as to the conduct of Urban Search and Rescue operations and, in particular, the sequence of activities is contained in “SOP\_INC002\_Six Stages of Rescue”.

### Prior to Arrival at Incident

It is vital that all USAR Units are properly prepared for their role in structural collapse rescue operations and this preparedness includes vehicles, equipment and personnel.

- Vehicles
  - Prime Movers and Multi-Purpose Vehicles should be correctly maintained and free of defects.
  - Batteries should be charged.
  - Regular checks should be carried out according to the appropriate guidance.
  
- Equipment
  - All equipment will be stowed in an appropriate position and in an appropriate container in accordance with the manual handling regulations.
  - An up-to-date equipment inventory should be maintained and carried on each USAR Module.
  - Equipment should be correctly maintained and free of defects.
  - Batteries should be charged.
  - Regular checks should be carried out according to the appropriate guidance.
  
- Personnel
  - All personnel using USAR equipment must have received information, instruction and training in the safe use of the equipment.
  - All personnel must have received Dynamic Operational Risk Assessment Training (DRA).
  - All personnel must be provided with the correct PPE and RPE, appropriate to the tasks that they will perform. Appropriate PPE and RPE will include a helmet, boots, gloves, overalls, eye, respiratory and hearing protection. For specialist tasks, specific PPE and RPE must be provided.

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- Incident Command training will be provided for all supervisory personnel as the principles of ICS must be applied at all incidents, training areas and places of work.

**On Arrival at Incident**

It is likely that incidents requiring the attendance of USAR will be well developed before arrival of the USAR Units, with all aspects of the Incident Command System well established. It is therefore important that the initial USAR Units in attendance establish communications and seek to integrate into the existing systems of work.

- Supervisory staff will need to contact the Incident Commander or the Incident Command Unit, establishing knowledge of the arrival of USAR Units and their capability.
  - A brief information sheet, which can be left with the Incident Command Unit, may assist in this process.
- Communications and liaison need to be established with the existing incident command structure.
  - A briefing between the Incident Commander (or a nominated representative) and USAR supervisory personnel needs to be undertaken as soon as possible, from which an ‘Incident Action Plan’ for the USAR Units can be developed.
  - Form USAR202 “Operations Plan” can be used for this purpose.

**Commencing Operations**

Once a briefing has taken place and the role and purpose of the USAR resources is understood, the USAR Units can commence operations. Initially, it is likely that a number of activities will need to take place in parallel and the USAR sector commander will need to consider which activities have priority.

- Base of Operations
  - A suitable area in which the USAR Modules can be unloaded needs to be identified.
  - Personnel need to be identified to operate the USAR Logistics function.
  - A logistics system must be set up to monitor and track equipment use.
  - As well as equipment logistics, welfare and rest areas should be considered.
- Scene Assessment and Information Gathering
  - Efforts should be made to gather as much information as possible from within the existing incident command structure.
  - If necessary, additional information, specific to the requirements of collapse structure operations, should be gathered by observation of the scene and interviews with relevant persons.
  - Form USAR204 “Site Risk Assessment” can be used for this process.

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- Consideration should be given to the deployment of a reconnaissance team or to a remote aerial platform in order to gather information.
- A safety briefing, using information already available (from the existing ICS) will be given to participating personnel prior to reconnaissance commencing.
- USAR Operational Planning
  - An information management and planning cell needs to be established.
  - USAR resources on-scene must be recorded and a USAR command structure established. Form USAR203 “Resource List” can be used for this purpose.
  - Information being gathered will need to be collated, assessed, stored and presented in a way that supports any decision-making process.
- USAR Safety Management
  - Safety officers must be nominated as soon as possible and positioned effectively.
  - Safety officers need to be linked to the information management and planning cell in order that safety information can be rapidly collected and disseminated.
  - Safe operating areas must be established. Cordons and hazard zones should also be marked. Cordons will be used to denote traffic routes, and demarcation of hazardous areas.
  - Dynamic risk assessments based on the information received from the scene assessment process can dictate additional control measures, and will provide personnel with information as to the working environment.

**USAR Operations**

Once a USAR command structure is established and safety, logistics and planning functions are in place, USAR operations can fully develop. Generic considerations are:

- A safety briefing will be given to all personnel prior to starting work.
- Crews will consist of a minimum of two personnel as there should be no ‘lone working’ within the structural collapse environment.
- The Incident Commander will ensure that emergency evacuation procedures are in place and that personnel are aware of such arrangements.
- Utility services should be isolated before any rescue work proceeds and, if this is not possible, the condition of the utilities present in the structure should be continually monitored.
- Throughout the operation, where possible, there should be an emergency crew standing by in case of further collapse. This crew should not be used for any other operation. If they are deployed, a further emergency crew should be assembled.
- Where natural lighting is insufficient, ensure all incident ground sectors are suitably & sufficiently illuminated.
- Appliances and equipment such as pumps and generators may cause vibration and further collapse. Therefore they should be positioned well away from

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weakened buildings and structures. Atmospheric conditions should be continually monitored to ensure the safety of personnel.

- Incident commanders must be aware of the hazards posed by helicopters operating in the vicinity, such as noise, pressure waves and vibration. They must be prepared to instigate an air exclusion zone around the incident. Such a measure must be done in close co-operation with the police.

### Personnel Safety Precautions

It is vitally important that all fire service personnel appreciate the hazards associated with incidents involving collapsed structures and are able to identify and put into operation the appropriate control measures. Training in hazard awareness, and practice in applying the appropriate precautionary measures, should be part of the training syllabus.

Rescue personnel must constantly observe all safety precautions to protect themselves from injury and be alert to any changes in conditions that may cause an additional threat to safety and to alert all team members of the danger. In particular:

- Personnel must look up and down before entering a structure, checking for overhead hazards and safety of flooring, etc.
- When inside buildings, personnel should keep close to walls – as a weakened floor may collapse with the weight of the rescuer.
- Utility services should be isolated before any rescue work proceeds, but personnel should be aware that some supplies may not have been located and made safe. Therefore they should not cut water pipes, gas pipes or electrical cables.
- Personnel must be aware of the hazards associated with large amounts of broken glass that the force of the collapse could have embedded into walls and furniture.
- Personnel should not force doors or windows as they may be wedged in a position that is supporting a load.
- Due to the arduous nature of rescue work, all personnel should be aware of the need for regular rotation of personnel.

### Post Incident Activities

After any significant incident a structured debrief should be undertaken. Following the sequence of events as they took place at the incident will give a methodology to the process in which identification of good points as well as bad ones is important. The information gained from this process should be used to re-evaluate, and if necessary, amend structural collapse related systems and equipment.

- All accident, injuries and near misses must be investigated and reported as required by the Health & Safety reporting requirements.

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- A review of risk assessments and operational guidance must be undertaken following accidents, injuries, near misses and operational and training de-brief information.

At some incidents involving structural collapse, particularly where the incident is protracted, emotional strain may well manifest itself. The use of Critical Incident Stress Debriefing, both structured and immediate post incident along with the availability of counselling must be given due consideration in these cases.

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