



Information Note

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Title:	Time critical rescue of casualties by ladder
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Background:

The FRS Manual, Volume 2, Fire Service Operations, Safe Work at Height recognises that casualty carry down is an option for the rescue of unconscious casualties from height. It also states that all personnel must be trained and competent in activities that are reasonably foreseeable and that they are expected to undertake.

On behalf of CFOA, the National Safe Work at Height Working Group undertook research and established that time critical rescues of this nature are occurring across the UK fire and rescue services with a variety of methods being used but with limited training being received by the personnel undertaking the rescues. These time critical rescues included the recovery of both unconscious and conscious casualties.

These results clearly demonstrate a requirement for techniques that will allow the immediate rescue of casualties via ladder in situations where there isn't sufficient time for additional safety equipment to be deployed. Following this, the CFOA National Safe Work at Height Working Group undertook further research to establish good practice that, whilst allowing the immediate recovery of a casualty via ladder, mitigated the risk to the fire-fighter undertaking that rescue.

This document includes :

- Risk assessment considerations
- Operational techniques for the time critical rescue of casualties via ladder
- Training
- Audit and review of operational incidents.

Whilst the techniques detailed in this document should be considered as good practice, it does not preclude fire and rescue services implementing additional control measures and techniques beyond that stated in this document.

It should be noted that the techniques detailed within this Information Note are intended to be an alternative rescue method to the live carry-down, which it is considered has unacceptable practical and physical limitations. The use of any of the techniques detailed within this Information Note must be informed by a dynamic risk assessment which should take into account a number of factors such as the size of the casualty, the physical strength and condition of the Firefighter undertaking the rescue, the environment, the risks from the fire etc (see Risk Assessment Considerations below).

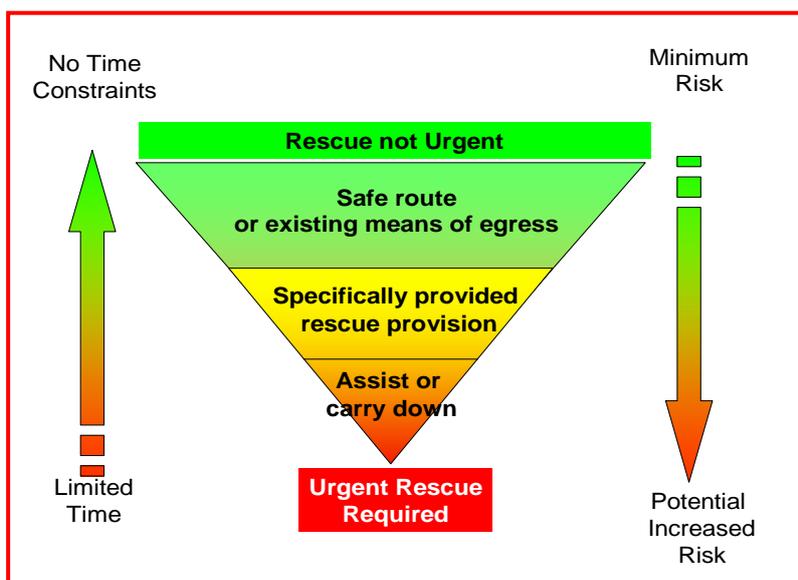
The techniques detailed within this Information Note were trialled extensively but within reasonable limitations and with safety devices. It is strongly recommended therefore that any training is undertaken with a simulated casualty and with safety devices (see Training and Additional Considerations below).

Risk Assessment Considerations:

The FRS Manual, Volume 2, Fire Service Operations, Safe Work at Height states that there is a hierarchy that should be applied when deciding the method of rescuing casualties from height. This will be determined by the circumstances of each incident and risk assessment.

If immediate rescue is necessary to prevent serious injury or death, the most appropriate solution may be to use fire and rescue service ladders for assisted walk-downs or carry-downs.

The following diagram is given as a guide to this process.



All techniques described in this document can be used with all FRS ladders but it is generally preferable to make use of the most substantial ladder available that can access the point from which the casualty is being rescued. The employment of the techniques described below will minimise the potential for problems arising from the handling of casualties.

Operational Techniques for the Time Critical Rescue of Casualties via Ladder:

There are three identified good practice techniques that can be used for the time critical rescue of a casualty via ladder:

- Walk down
- Face to face
- Cradle

The 'walk down' technique can be used to assist a conscious casualty down a ladder in a manner safe for both rescuer and casualty.

The 'face to face' technique is generally seen as suitable for the rescue of unconscious larger casualties whilst the 'cradle' technique will be more appropriate for unconscious smaller casualties.

Walk down:

- The ladder should be pitched 3 to 5 rounds above the sill.
- The ladder must be footed at all times.
- The casualty will need reassurance and direction on gaining access to and descending the ladder.
- The rescuer's hands need to be fully around the strings of the ladder.
- Prior to descending, the rescuer must clearly shout "Descending" to indicate to all that they are about to move.
- The rescuer needs to maintain close proximity with casualty.
- Descent should be at an even and deliberate pace
- If the casualty becomes distraught the rescuer can control the situation by applying pressure to the casualty's body and holding the casualty against the ladder.



Considerations for 'face to face' and 'cradle' techniques:

- The head of the ladder should be pitched just below the sill to aid the handover of the casualty to the rescuer.
- The pitch should not be too shallow as it can effect the weight distribution of the casualty.
- When using the 13.5 or 15 metre ladder the poles must be housed.
- The ladder must be footed at all times.
- When receiving the casualty at the head of the ladder, the rescuer must ensure that personal safety on the ladder is not compromised by adopting a stable position with both hands and feet in contact with the ladder to maintain a secure position.
- Prior to descending, the rescuer must clearly shout "Descending" to indicate to all that they are about to move.
- Planning should take place to ensure the casualty can be taken from the rescuer at the foot of the ladder.

Face to Face:

- The rescuer should be positioned at a suitable height and ready to receive the casualty with both feet on the same round and both hands on the same round.
- The casualty should be passed feet first in between the arms of the rescuer until each leg is positioned either side of the rescuer and the casualty's back is in contact with the ladder.
- The rescuer's arms will be positioned under the armpits of the casualty.
- The majority of the weight of the casualty should be taken by the ladder whilst

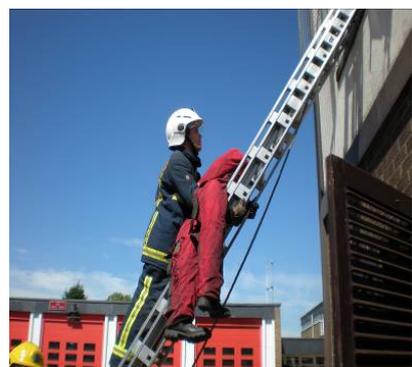


the remainder will bear onto the rescuer's legs and arms.

- Control of the movement of the casualty can be achieved by how tight the rescuer holds the casualty onto the ladder.
- Descent should be at an even and deliberate pace maintaining three points of contact at all times.
- During descent, either the rounds or the strings can be used. This will be dependant on the size/build of the rescuer and casualty and should ensure the most secure holding position.

Cradle:

- The rescuer should be positioned at a suitable height and ready to receive the casualty with both feet on the same round and both hands on appropriate rounds.
- The casualty should be fed across the ladder feet first and facing the rescuer.
- The casualty is positioned so that one arm of the rescuer is placed between the legs and the other arm is under and in contact with the casualty's lower armpit.
- This should result in the casualty's body being positioned slightly diagonally with the head higher than feet.
- Control of the movement of the casualty can be achieved by how tight the rescuer holds the casualty onto the ladder.
- Descent should be at an even and deliberate pace maintaining three points of contact at all times.
- During descent, either the rounds or the strings can be used. This will be dependant on the size/build of the rescuer and casualty and should ensure the most secure holding position.



Training:

The FRS Manual, Volume 2, Fire Service Operations, Safe Work at Height states that all personnel must be trained and competent in activities that are reasonably foreseeable and that they are expected to undertake.

It is expected that all fire-fighters, that may be exposed to these scenarios, will need to maintain competence accordingly. Therefore these techniques should be considered as core skills.

The training needs of individuals, their level of experience, and the circumstances of local work environments will dictate the quantity and frequency of training activities.

Following the initial acquisition of skills, maintenance of competence can be achieved under the supervision of watch managers in the same way as other core skill such as ladder use.

It is recommended that continuation training should expose fire-fighters to realistic casualty weight. This will reinforce the risk assessment process by enhancing the risk perception of fire-fighters undertaking these techniques.

Additional Considerations:

- All training for these techniques must consider the use of suitable fall arrest equipment
- Initial training for these techniques can be achieved at lower levels and should be undertaken with dummies.
- Dummies can be increased in weight as continuation training is undertaken

- Competent fire-fighters should train with live casualties to provide a more complete realistic awareness of casualty weight and movement.
- Fire-fighters should train with various sized dummies/casualties to ensure familiarisation with the effects of varying weight, size and build of casualties.

Audit and Review of Operational Incidents:

These techniques are for the time critical rescues of casualties and should be considered as non-standard procedures. As such they must only be employed following a dynamic risk assessment and in circumstances that will not permit rescue to be achieved by less hazardous means.

It is recommended that all operational occurrences of these techniques are subject to review in order to:

- Emphasise the need for thorough risk assessment.
- Ensure that the risk assessment process is being implemented correctly.
- Ensure the techniques described above are being used appropriately.
- Identify any learning outcomes.