



The Provision & Use of Community Public Access Defibrillators – Station Wide



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Community Public Access Defibrillators – Station Wide

1. Considerations

The following observations should be considered in the decision process;

- The use of an AED constitutes a medical emergency of the highest category. Early defibrillation is a crucial part of the chain of survival and although there is no legal requirement for an employer to provide AEDs, it is recommended that Merseyside Fire & Rescue Service make the equipment available in accordance with the results of the first aid needs assessment & AED risk assessment set out in Appendix A.
- That MFRS consider relocating its station Automated External Defibrillator (AED) externally to allow / facilitate public access
- Estates team to consult with NWS & MFRS Litigation Team regarding NWS M.O.U (Memorandum of Understanding) on C.P.A.D (Community Public Access Defibrillators)
- That Estates Team consider the production of an AED service instruction to reflect CPAD (Community Public Access Defibrillators). This information should be captured to reflect the NWS MOU and what stations need to do for full compliance
- Estates department consider sourcing a suitable 'fit for purpose' external AED box housing to include the following;
 - IP66 rated against dust and water
 - Protected against corrosion with an outdoor powder coat
 - Stainless steel keypad lock
 - Internal battery powered LED light that activates in darkness on a motion sensor and can be used as a removable torch
 - Painted in a high visibility colour
 - A Thermostatically controlled heater will ensure the device is housed at an optimum temperature
 - Internal hook to accommodate any defibrillator without carry case
 - Viewing window to easily check status of AED
 - Concealed hinges
- That stations consider carrying a spare set of defibrillator electrodes in the event of C.P.A.D being used

2. Purpose

The Estates Team requested H&S to undertake a review of its station AED requirements with a view of relocating/mounting its AED's (Automatic External Defibrillator) externally to allow community access. The intention is to provide C.P.A.D (Community Public Access Defibrillators) in the community which will be fully accessible by dialing the emergency services via its 999 or 112 numbers.

This report provides considerations for the relocation of station AED's to be mounted externally on stations to become C.P.A.D.s (Community Public Access Defibrillators). The need for an AED is based on a suitable and sufficient first aid risk assessment whereby all influencing factors have been carefully considered by the Health & Safety Manager and Estates Manager. For full risk assessment summary see Appendix A & B.

The proposal is to move/mount AED defibrillators on stations along with the acquisition & purchase of defibrillator security boxes by the Estates team. Please note: AEDs must comply with the Provision and Use of Work Equipment Regulations (PUWER) and will require regular maintenance and inspection. There is no statutory requirement for employers to provide defibrillators in the workplace. Health and Safety Executive (HSE) guidance states that, if you decide to provide a defibrillator in the workplace, it is important that those who may use it are appropriately trained.

HSE refers to the Resuscitation Council for further advice and guidance. The Resuscitation Council states that, in a workplace situation, it will be sensible to train first aiders or appointed persons in the use of an AED. However, all operational personnel are FREC (First Response Emergency Care) trained which includes AED's.

SCA (Sudden Cardiac Arrest) is an important cause of death in all developed western countries. In Europe, around 1 in 1,000 of the population suffers SCA each year, so in the UK there are likely to be approximately 60,000 cases annually (Resuscitation Council). In England, the ambulance service attempt resuscitation in approximately 25,000 cases per annum but at present, only a small proportion survive.

After a cardiac arrest, every minute without CPR (cardiopulmonary resuscitation) and defibrillation reduces someone's chance of survival by 10 per cent (Resuscitation Council). For the best chance of survival, a shock to the heart should be delivered within the first 3 minutes; therefore early access to a defibrillator is vital. Moreover the average response time for emergency medical services in a typical community is approximately 8 minutes (heart start).

3. First Aid Needs Assessment - Defibrillator

Merseyside Fire & Rescue Service have provided an AED defibrillator to all its 26 fire stations based throughout Merseyside. These AED's can be currently accessed by employees, contractors or visitors to fire service premises when crews are in and available. As stated, whilst Employers have no obligation to provide first aid for members of the public, the HSE strongly recommend that employers take them into consideration when carrying out a first aid needs assessment.

To comply with HSE recommendations Merseyside Fire & Rescue Service have carried out a first aid needs assessment based on the service's single and double storey stations which constitute the bulk of MFRS premises throughout Merseyside. The location of the AEDs has been taken by providing an AED to a person within a 3 minute timeframe (*Resuscitation Council*).

Although walking speeds can vary greatly depending on many factors such as height, weight, age, terrain, surface, load, culture, effort, and fitness an average human walking speed has been recorded for the assessment based on an average human being which is 3.00 miles per hour (mph); this would equate to a maximum travel distance of approx. 400m for older individuals (*Walks & Treks – British Heart Foundation*). For the purpose of the assessment **Fig 1.** (*denotes the nearest Ambulance/Hospital Location). This provides an AED risk assessment for those risks noted in **Fig 2.**

Fig 1. Station Location

* Nearest Ambulance / Hospital Station

- | | |
|--|----------|
| • Station 32 – Formby Fire Station – 1 storey station | >6 miles |
| • Station 11 – City Centre Fire Station – 2 storey station | <3 miles |
| • Station 25 – Wallasey Fire Station – 2 storey station | <6 miles |

Fig 2. The assessment considered the following risks at each site:

- Work Activities e.g. operational duties, gym use, manual handling & equipment
- Community room activities
- Location/Remoteness
- Footfall
- The nearest accessible AED
- The nearest Ambulance Station
- The distance from the nearest Hospital /Accident & Emergency Unit

Of the three stations assessed station 11 & 25 both have a prevention & protection teams on the 2nd floor of the buildings. Both Station 11 & 25 are day crewed only with Station 32 a LLAR station.

Stations, not just those that are day crewed, will require a decision to be taken regarding suitable 'custodians' as noted in NWS M.O.U for C.P.A.D.s in the event they are used by members of the public. And more so, if crews are unavailable / out of station.

All three stations are equipped with fully functional gyms onsite which are used by operational personnel & in some cases NWS personnel. Station 25 however, has its own heartbeat gym which is used daily by members of the public from the local community and is equipped already with a fully functional AED which is managed by Wirral Heartbeat.

The nearest ambulance/hospital stations to these locations are between 3 - 6 miles away. However, Station 32 is shared with NWS and is staffed with an ambulance crew. However, ambulance crews are not always available, or on station, and are away from station frequently. Therefore, the following first aid needs observations should be considered in the decision making process;

That considerations for 1 defibrillator are;

- Facility has only one floor
- Size of the facility is < 150,000 sq. ft
- Outside work area is < 2 acres
- There are no areas inaccessible to responders

Additionally, In the presence of any of the following factors an additional AED should be considered:

- For every 150,000 sq ft over 150,000 sq ft
- For every additional 2 acres of outside work area
- For every 3rd floor of a multi-floor building
- For every inaccessible work area/floor
- For every Specialized Response Team that requires their own response equipment

4. Maintenance

Each defibrillator self-tests vital functions automatically on a daily, weekly and monthly basis to ensure it is ready for use. The lithium battery shelf life is 5 years or 200 shocks. Adult electrode pads have a 30 month shelf life however they must be replaced after each use. It is recommended that a spare set of electrodes are kept on station in the event of the defibrillator being used.

The Public Access Security Box should plug into a standard wall socket and feature frost protection heating, status lights, internal light to aid night user, single hand entry and pre-set locking codes as required. Signage for public access defibrillators should be used to show where it is located.

A visual inspection of the defibrillator and public access security box is required on a weekly basis. A process will need to be put in place for the AED to be checked regularly by an onsite responsible person to ensure there is no damage to the defibrillator or security box.

5. Vandalism

It is worth noting that acts of vandalism may be carried out on C.P.A.D.s and as a result could affect the use of the machine and first aid response. The Public Access Security Box must have a mechanical lock which can only be accessed with a pre-set code. To access the AED the user must first call 999 or 112 and quote the box number, the 999 or 112 operator will then issue the user with a 4 digit code to release the box and dispatch an ambulance.

6. Legal Implications

In English law, for someone to be held liable it would have to be shown that the intervention had left the victim in a worse situation than if there had been no intervention. No case brought against someone who tried to provide first aid has been successful in the UK, where the courts have tended to look favorably on those who try to help others.

There is currently no legislation in place to make AED's mandatory in the workplace. However there are efforts being made to promote the introduction of legislation to make the provision of AEDs mandatory in the workplace, schools, sports venues, and certain public buildings.

7. Equality & Diversity Implications

The Equality Act is relevant to the decision in this report as the decision relates to eliminating discrimination, advancing equality of opportunity, or fostering good relations between different people illustrating Merseyside Fire & Rescue commitment with regards to the health, safety & welfare of staff and members of public.

A full Equality Impact Assessment (EIA) has not been carried out, because while there are some equalities impacts, it is not proportionate to carry out a full EIA.

8. Site Images

For assessment purposes, the Images show the current AED locations (**Fig's 1, 3, and 5**). (**Fig's 2, 4, and 6**) show potential / mounting areas for C.P.A.D's

Station 32 - Formby Fire Station

Fig 1



Fig 2



Station 11 – City Centre

Fig 3

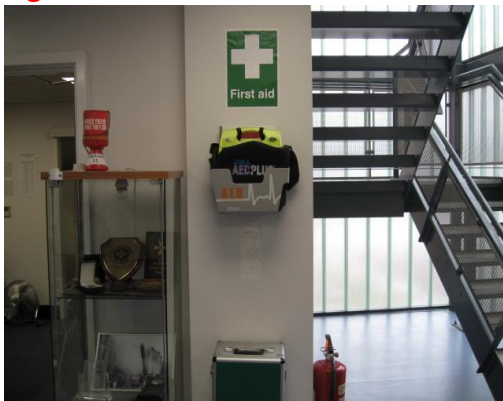


Fig 4



Station 25 – Wallasey Fire Station

Fig 5



Fig 6



9. Appendix A - Risk Assessment – Defibrillator

10. Appendix B – AED Needs Assessment

11. Defibrillator Guidance

- *The Health and Safety (First-Aid) Regulations 1981*
- *CPR, AEDs and the Law – The British Heart Foundation*
- *A guide to Automated External Defibrillators (AEDs) – Resuscitation Council*
- *Cabinets for public-access defibrillators – Resuscitation Council*
- *NWAS Memorandum of Understanding – Community Public Access Defibrillators*