

Great Western Park Residents' Association

Community Defibrillator Project - Business Case



Intention

The intention of the project is to provide all Residents living on Great Western Park, Didcot with good access to an Automatic External Defibrillator (AED), in the event they experience a Sudden Cardiac Arrest (SCA).

The aim is to accompany this with a Community training programme, to instruct on the operation of the AEDs and also improve awareness of Cardiopulmonary Resuscitation (CPR) techniques.

Background

Sudden Cardiac Arrest

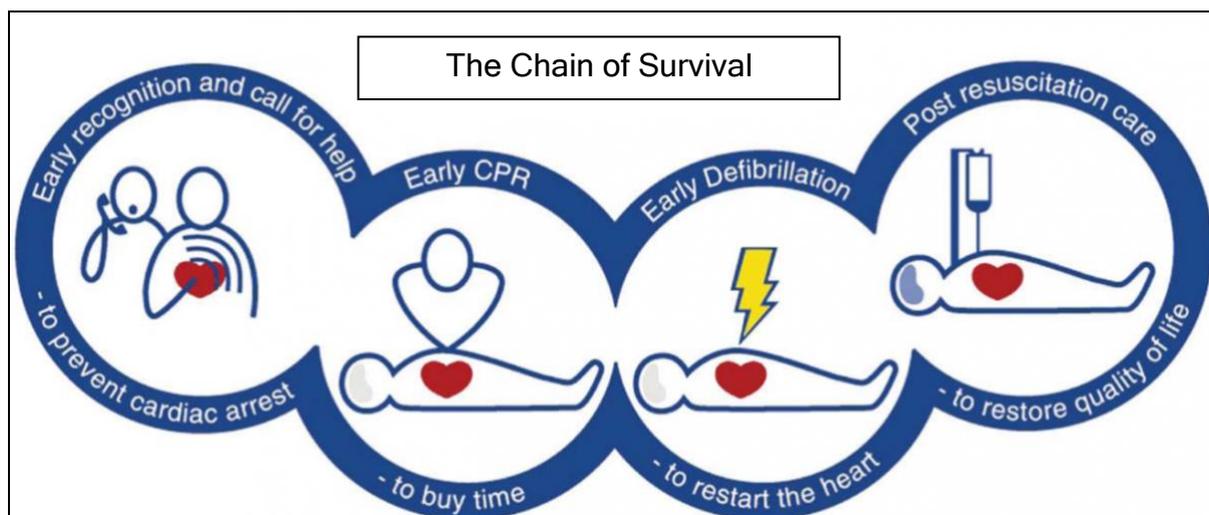
According to statistics available from the British Heart Foundation and Department of Health, Sudden Cardiac Arrest (SCA) is a leading cause of death in the United Kingdom, accounting for an estimated 100,000 deaths each year.

Cardiac arrest is the term used to describe sudden cessation of heart function. After cardiac arrest occurs, blood stops being circulated to the vital organs and consciousness is lost within seconds. Unless resuscitation is started promptly death will occur within a few minutes, see the chain of survival.

Each year about 30,000 people receive resuscitation for an Out of Hospital Cardiac Arrest (OHCA) in the United Kingdom. Currently only about 8% of those people will survive to go home from hospital.

In contrast, Seattle, USA claims over a 60% survival rate, with a comprehensive programme of Education, Training and availability of AEDs.

The introduction of a Community Training programme to improve awareness and early recognition of symptoms, will have a great improvement on the first stage of the Chain of Survival. As without by-stander knowledge of the first two elements of the chain of survival, the chance of survival is likely to be extremely low. Hence the importance of combining the purchase of the equipment, with a Community Training programme.



Defibrillator

A defibrillator is a device that gives a high energy electric shock to the heart through the chest wall, to someone who is in cardiac arrest.

This high energy shock is called defibrillation, and it's an **essential lifesaving step** in the chain of survival. If you come across someone who has had a cardiac arrest, it's vital to call 999 and start CPR. Then you should find out if there is a defibrillator nearby. The Automated External Defibrillators (AEDs) are designed to be simple to use and require little or no training. They can also assist someone not very familiar in CPR to perform it.

Time and Location are absolutely critical

Medical attention must be administered as soon as possible after the victim collapses; the chances for survival decrease by 7-10% with every minute you wait. The average SCA victim is middle-aged or elderly, although some victims are in their 30s or 40s and it can happen to anybody, with little or no warning.

More than 70% of SCAs occur in the home.

Currently, the nearest AEDs are located at the Didcot Community Hospital and Didcot Civic Hall. This is currently over 1,300 metres away from some dwellings and since the road network has been planned to be very indirect, this distance becomes in excess of 2km by vehicle. As the person is receiving CPR whilst waiting for Defibrillation, they are unable to be moved, the device has to be brought to the patient, thus doubling all these distances.

If it assumed that a fit person, without access to a vehicle, can run 1,000 metres in around 6 minutes. This would translate to 16 minutes on foot, to currently obtain the AED, leaving the patient almost no chance of survival. Even with immediate access to a vehicle, the minimum trip time would still be over 8 minutes, reducing the chance of survival by 80%. Even a small reduction in time can have a great impact on

chances of survival and the best way to do this is to reduce the distance required to obtain and AED.

Great Western Park

Great Western Park (GWP) is a new housing development consisting of 3,300 homes, straddling South Oxfordshire and Vale of White Horse Districts, to the West of Didcot in Oxfordshire. Didcot has a population in excess of 30,000 and this is set to increase significantly with continued residential developments. Construction of GWP was commenced in 2011 and it is expected to be completed by 2024.

Great Western Park Residents' Association

The Great Western Park Residents' Association (GWPRRA) was officially formed following a residents' meeting held on the 24th May 2012. Part of the Constitution states:

"2. Objectives and Aims

a) Objectives

i. The objective of the Residents' Association is to safeguard and promote the interest of the residents in the area on matters concerning housing and their environment.

ii. To help improve living conditions, community facilities and services for residents living within the Groups' area."

Provision of the AED would help meet the Constitutional Objectives, by significantly improving the chance of survival of all Residents', in the event of them suffering an SCA.

Method of Implementation

Since the construction of GWP has not reached completion and the feasibility of raising the funds required has not been tested, a three phased approach is suggested.

The first AED would be installed and the most central location available. A further two will then be implemented at later times to achieve no more than 500m between Residents' and the AEDs. This would then provide a theoretical minimum of 50% survival chance, to be in line with Seattle, USA.

Locations

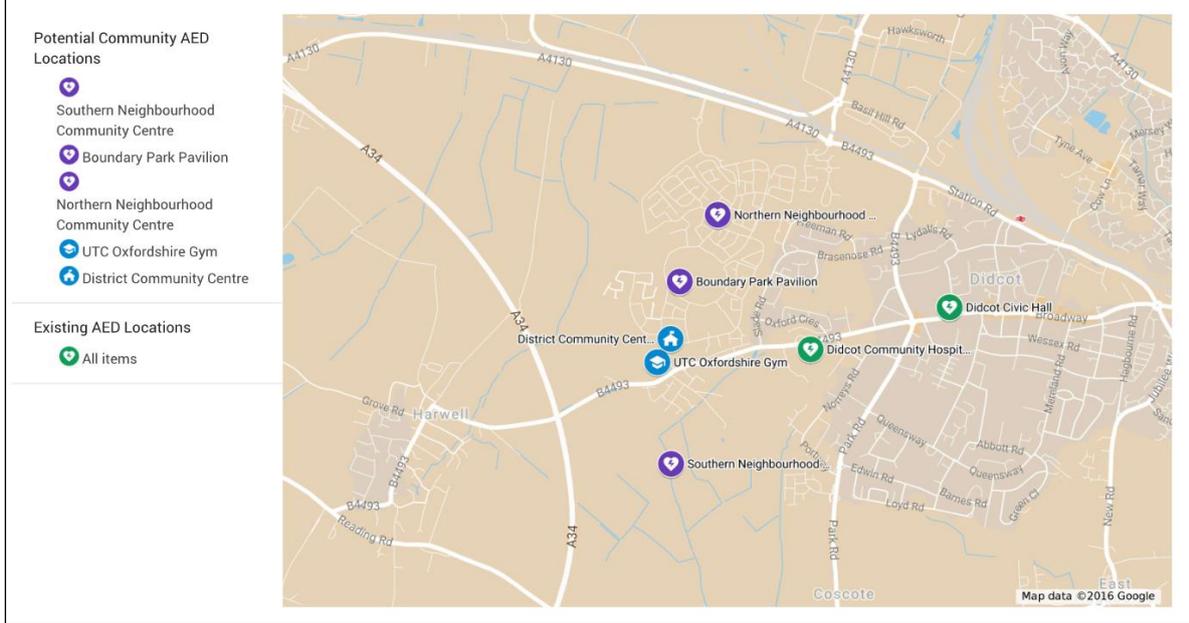
From the AED information map below it can be seen that currently the Boundary Park Pavilion provides a fairly central location to GWP and is likely to have trained persons in close proximity. This is further justified by the fact that intense exercise can increase the chances of developing a SCA. Permission to use this location has

already been obtained. Schools are less favourable locations, since children do form the lowest risk group.

The Northern Neighbourhood Community Centre could be the Phase 2 proposed location, particularly if the far Northern housing is approved. Finally the Southern Neighbourhood Community Centre could be the location for Phase 3. Permission would have to be sought for these but it is not envisaged to be an issue.

Should the proposed Health Centre or Nursing Home, close to the District Centre, wish to install their own AEDs, they would be encouraged to make them public access. A review of the locations could then be conducted and the relocation the AEDs can be done, if required.

AED Information map



Signage

As part of the Project, it is also proposed that all public and business facilities be offered signs, directing people towards the nearest AED. This has an additional purpose of raising general community awareness.

In addition to conventional signage, the aim will be to register the locations with the “Save a Life app” and all the other UK based AED locator software services.



Training

South Central Ambulance Service (SCAS) provide 1½ hours of free training for each AED procured. Other organisations such as the British Heart Foundation (BHF) and

Thames Valley Police (TVP) can also provide training sessions, as well as private companies. The aim would be to provide as much training to a wide section of the Community as possible. The Boundary Park Sports Association (BPSA) has already agreed to ensure all the sports coaches receive training.

Cost

The cost of each IPAD SP1 AED, recommended by SCAS and when purchased through them is £850+VAT. The cost of a Public Access AED cabinet is £550+VAT. These two initial capital costs do not include the fitting and total **£1680** including VAT.

There is also a continued running cost comprising of Pads £25+VAT and Batteries £150+VAT which last at least 4 years in the Cabinet. This amounts to around **£55** including VAT per year running cost per installation. This does not include the minimal electricity cost to heat the cabinet to above 5°C.

The signage cost will be around **£95** including VAT per installation.

The training cost should be kept to a minimum but if required, additional funding can be sought to provide paid training sessions to members of the Community.

A total of **£1775** inc. VAT initial capital cost should be sought for each installation phase, with **£55** inc. VAT per year per unit running cost.

Funding

The strategy for funding should be the multi avenue approach. The British Heart Foundation Funding only makes provision for unlocked cabinets and this is undesirable given there are no plans for 24hour staffing or security monitoring of the proposed sites.

After seeking advice from South Central Ambulance Service (SCAS), applications should be made to all the Local Authorities(South Oxfordshire District Council, Vale of White Horse District Council, Harwell Parish Council and Didcot Town Council), as they are often granted for such projects.

Other stakeholders, such as the Developers and Housing Associations should also be contacted, in order to seek funding and advice.

The GWPR will also undertake regular community Fundraising Activities with the assistance of the Boundary Park Sports Association (BPSA).

Timescales

The Phase 1 installation should be an immediate priority, since the current availability to Residents is very poor. The intention should be to fund and install this as soon as financially viable. With the increasing population of GWP, the chance to save a life by this project also increases.

Phase 2 should follow immediately after Phase 1 and Phase 3 will be rolled out in line with the development in that area.

Additional Benefits

There are several direct benefits of the project:

- The physical increase in survival by having more ready access to the AED.
- The increased bystander awareness of the SCA condition, further improving response and chances of survival.
- Beside the Residents, the project also benefits guests to the area and the surrounding populous.

There are also a number of indirect benefits the project can bring:

- The increase in Health awareness of the Community, leading to generally healthier populous.
- The improvement of Community spirit, as it gives a reason for the Community to get together and work towards funding the common goal.
- Leading to a greater sense of “caring” in the community, as residents working towards a common goal for group benefit.

Risks

The only identified Risk with this project is, not completing it and people suffering loss of human life as a result. There are no cases in the UK of people being prosecuted for trying to save another life, with best intentions. The equipment being procured is all recommended by SCAS, so should be the most suitable available.

Links and references

<http://www.scas.nhs.uk/>

<https://www.bhf.org.uk/>

<https://www.zoll.com/uk/resources/sudden-cardiac-arrest/>

<http://www.sca-aware.org/>

<http://www.heartandstroke.com/>

This document was prepared by Gareth Clarke on behalf of the Great Western Park Residents' Association.

