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# North East Regional Flood Rescue & Damage Prevention Project – April 2010

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MD AET Flood Defence Ltd



## Executive summary

During May 2009 AET was approached to give guidance and support a project which was being funded through the North East Improvement and Efficiency Partnership. This was a joint project between Cleveland Fire Brigade, County Durham and Darlington Fire and Rescue Service, Northumberland Fire and Rescue Service and Tyne and Wear Fire and Rescue Service.

- AET was asked to investigate the best solution in providing self inflating sand bags to the Project, that would deliver a self sufficient capability in the region to deal with rescues from major flooding incidents.
- To establish a regional stock of “alternative sandbags” which could be mass deployed to flood areas using Fire & Rescue Service Prime Mover Vehicles for distribution by local authorities to help prevent water entering properties.

The project was complex, with many HSE restrictions due to the required delivery by Prime Movers. This resulted in AET having to provide a bespoke solution which had to be micro managed, with many joint trips to Scotland to oversee the production of the containers.

To quote Steve Owers EP Flood Project Manager (Regional Improvement and Efficiency Partnership)

“When I look back at the original tender for the basic provision of Aquasacs and wheeled cages I realise what a great deal of additional time and effort AET and particularly Fran Cleeton have contributed to this project. We continue to work closely together and I would have no hesitation in utilising AET in the future, Fran was also heavily involved in producing the protocol which will be used by the Fire & Rescue Services and the local authorities in the North East to request, deliver and replace any Aqua sacs used”

An overview of the equipment provided and the problems solved can be found in the appendix to this report.

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## Background

Following a number of serious flooding incidents over the last few years not only in the North East (South Church 2000, Morpeth 2008) but also elsewhere in the Country ( Carlisle 2005, Humberside, Sheffield and Gloucester 2007) the four North East Fire & Rescue Service submitted a successful bid to improve the response to serious flooding incidents within the North East.

The Regional Flood Rescue & Damage Prevention project is funded through the North East Improvement and Efficiency Partnership and is a joint project between Cleveland Fire Brigade, County Durham and Darlington Fire and Rescue Service, Northumberland Fire and Rescue Service and Tyne and Wear Fire and Rescue Service.

The aim of the project is to provide a regional flood rescue response module that will deliver a self sufficient capability in the region to deal with rescues from major flooding incidents. In addition to establish a regional stock of “alternative sandbags” which can be mass deployed to flood areas using Fire & Rescue Service Prime Mover Vehicles.

## Project elements

- To establish and or equip 5 Fire Service Swiftwater Rescue teams within the region to deal with technical rescues from flooding
  - To establish and or equip 10 Fire Service first responder teams within the region to deal with no technical rescues from flooding
  - To provide additional equipment for the three High Volume Pumps within the region. High Volumes Pumps were provided by the government as part of the New Dimension project following 9/11. They are capable of pumping eight times the amount of water of a normal fire appliance and have proved invaluable in all of the major flood incidents over the last few years
  - To provide “alternative sandbags” for delivery to a major incident 24/7 by Fire Service Prime Mover vehicles. Theses alternative sandbags contain a gel which expands when soaked in water can be used in similar ways to an ordinary sandbag. The great advantage is that they are pre filled, much lighter and easier to store than conventional sandbags. Theses alternative sandbags would be distributed by the Local Authority who will also pay for the replacement costs of any bags used in order to maintain the Mutual Aid Stock.
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## Quotes:

- Susan Johnson, Chief Executive of County Durham and Darlington Fire and Rescue Service said “We are delighted that our joint application for funding through the Regional Improvement and Efficiency Partnership was successful. This project will enable all the Fire and Rescue Services in the North East and our Local Authority partners to combine resources and capabilities for the good of our communities.”
- Steve Owers, Flood Project Manager, County Durham and Darlington Fire and Rescue Service said “This project gives the four North East Fire and Rescue Services the option to enhance their provision for dealing with rescues from flood water. It will also allow us to assist our partner agencies in the prevention of immediate flooding by assisting them to provide ‘alternative sandbags’ at major incidents.

## The alternative Sandbag Tender

To provide 20,000 alternative sandbags in 4 containers (specially made for Prime Mover movement) to be delivered to 4 central locations within the North East Region for Mutual Aid Stock.

The stock should be delivered in mobile units and should include a sufficient number of inflation tanks for the deployment of the bags. The inflation tanks should be easy to erect and have no frame. They should also be cost effective for single use.

## Conclusion of the tender process

During Nov/Dec’10 after completion of the 75 page tender document the tender was awarded to AET for delivery of the aqua-sac® for the project and the 5 year replacement policy.

## The tender was won by AET on the basis that:

- aqua-sac® is a Patented product that is fit for purpose.
  - AET is a company that could provide the expertise and flexibility in delivering the project that was to be a proto type and ‘Model’ for others in the industry.
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- AET carried the necessary product liability cover needed for such large scale deployment and had significant experience in similar initiatives.
- AET came with references from other Fire and Rescue services where aqua-sac® had provided a solution.

Steve Owers the Flood Project Manager said:

“ Even during the tender process it became clear that AET were a well organised company, their submission was well laid out and answered all our questions. Immediately after the contract was awarded Fran started to work closely with the project team. She came to the North East on a number of occasions to demonstrate Aqua sacs and other flood products to various interested parties. She also sourced wheeled cages to carry the Aqua sacs, helped design and print flood leaflets to our specification and sourced and evaluated a number of inflation pools until a pool was found which met our requirements”.

“Fran was also heavily involved in producing the protocol which will be used by the Fire & Rescue Services and the local authorities in the North East to request, deliver and replace any Aqua sacs used”.

“When I look back at the original tender for the basic provision of Aqua sacs and wheeled cages I realise what a great deal of additional time and effort AET and particularly Fran Cleeton have contributed to this project. We continue to work closely together and I would have no hesitation in utilising AET in the future.”

## Problems solved:

### Mobile units

It was decided that the most efficient and cost effective way of providing mobile units was to purchase standard (not bespoke) cages, cling wrapped for protection.



*Photo showing: Cages awaiting dispatch*

### What should be placed in each cage?



500 aqua-sac (10 boxes)

2 aqua-sac inflation tanks with foot pumps,

(the tank should be portable, capable of inflating at least 20 bags at once with no frame, can be inflated within 10 mins, and cost effective enough to be disposable)

100 leaflets giving instructions for use and EA guidelines

*Photo showing the Inflation Pool procured for the contract*

### Stability of stock due to the 45' angle the Prime Mover needs to offload the container?



*1<sup>st</sup> Flood prevention container  
moved into place for stock delivery*



*Sets of bars where installed for stability*

**Delivery on time and in budget.**



*Stock being loaded into the containers*



*A job well done!*



The North East Region now has 4 Flood Prevention Units in place with a provision of over 25,000 aqua-sac® s.o.s bags for Mutual Aid stock to make a real difference in times of an emergency.

Contract completed April 2010

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