

WHEN FLOODS THREATEN, HESCO FLOOD DEFENCES KEEP VITAL LOCAL UTILITIES RUNNING

How a great British invention that has already saved countless lives in Iraq and Afghanistan has now been put to good use at home on the flood plains of Gloucestershire

When Yorkshire businessman, Jimi Heselden invented the Concertainer® unit in 1990, little could he have imagined the wide range of applications his patented product would have.

These linked wire-mesh and fabric-lined baskets pull out manually in a matter of minutes into a 4'6" barrier, which can then be filled with aggregate to form a robust defence wall.

They have been used across the world - to defend against coastal erosion; upgrading the levees in New Orleans in the aftermath of Hurricane Katrina; and most prolifically in Iraq and Afghanistan to provide blast protection for UK and US soldiers.

It is perhaps no wonder, then, that following the widespread floods in the UK this summer, the expertise of the team from Leeds based company, Hesco Bastion, was called upon to provide a swift and effective response to the threat of further flooding at the Mythe water treatment plant in Tewkesbury and at the nearby Walham sub-station.

A race against the clock

When the Severn Trent water treatment plant was struck by severe floods, thousands of homes in the community were left without clean water. As those flood waters began to recede, Severn Trent engineers worked tirelessly to repair the plant and resume services, only to be hit with yet another flood warning which threatened to send the clean up operation back to square one. It was vital to move quickly to prevent a repeat of the previous week's disasters.

On the evening of Friday 27th July, an order was placed with Hesco to provide a protective barrier around the site. It was

delivered within four hours and work began on Saturday morning in what South West army liaison officer, Colonel Christopher Price, described as 'a very slick operation'. Contractors and the military worked together supported by a team from Hesco to deploy over a kilometre of chest-high Concertainer defence walls in less than 27 hours – a task that would have taken an estimated two weeks longer to complete with sandbags.

The units were quickly pulled into position and filled by bucket loaders with 2,400 tonnes of aggregate. The protective walls around the plant are now far more robust than traditional sandbag walls – fewer joins mean less opportunity for the water to seep through and the linked structure provides an extremely stable barrier against the possibility of future flooding.

Commenting on BBC TV's Midlands Today, David Wickens, Quality Manager at Severn Trent said of the new perimeter barrier, "It really does bolster the defences of this site from further flooding quite significantly...[providing] a good measure of protection for the next few years."

Blending into the local landscape

Indeed, although these defences can swiftly be deployed in an emergency, the solution they provide is far from just a temporary one. The Hesco system will protect these sites for at least four years and can be fortified to last even longer if necessary. "These barriers can be also be planted with foliage to blend in with the surrounding natural environment and reduce the impact that they might have on the landscape," said Jake McQueen, product manager at Hesco.

Saving a sub-station

For communities, coping with flood waters inundating towns and villages is hard enough without having to survive a loss of power in the aftermath. At Walham, where news footage showed flood waters just inches away from devastating the sub-station, this was a very real risk for National Grid. The company called in the experts from Hesco who assisted the Royal Air Force and the Army with the installation of the protective barrier stretching around 700 metres. The barrier was securely positioned in just 19 hours, averting a potential national disaster and ensuring that the power remained on for local residents.

The future of flood defence in the UK

Learning from the recent experiences in Gloucestershire, it is now hoped that Hesco defences may be used more widely in the UK to protect key infrastructures and ensure that when floods threaten utilities, local residents need not worry that their vital supplies of drinking water and power will be switched off.

Now that the flood waters have subsided, Hesco's work continues at another electricity sub-station at Castle Meads to ensure that they are prepared for what seems like an increasingly inevitable phenomenon in today's climate.

The expertise of the Hesco team and the years of experience they have in protecting people and locations throughout the world are invaluable assets when implementing flood defences both in an emergency and as part of a planned response to the flood risk.



Construction crew extending Hesco units at Mythe water treatment plant in Tewkesbury



Construction crew fill Hesco units at Mythe water treatment plant in Tewkesbury



Levee upgrade, East Jefferson, Louisiana



Hesco flood walls protect Walham electricity substation, Gloucester.



Hesco flood barrier control, Austria

For more information on **Hesco Bastion Ltd** please visit the website www.hesco.com or call **Jonathan Bird** on **020 7350 5454**