

[SECTIONS » EQUIPMENT](#)

London boosts foam capability to tackle capital's major emergencies

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Three bulk foam unit appliances go on the run in London this week - backed by new training and staffing capabilities - dramatically improve London's ability to fight major fires or spillages involving flammable liquids.



The highly specialised vehicles enable firefighters to tackle emergencies like aircraft crashes, chemical spills or fires on large industrial sites, where large amounts of foam must be applied to bring the incident under control.

The Buncefield Oil storage depot fire, and terror attacks like 9/11, provided a stark warning to London Fire Brigade about the capabilities needed to deal with significant emergencies on this scale.

Since then, the Brigade has been planning, training and introducing new equipment, and the new bulk foam units are the latest piece in this important jigsaw.

Jim Knighton, London Fire Brigade's Assistant Commissioner for Operational Policy said: "Our current bulk foam units have served us well for 15 years but we need new technology to meet modern challenges. The new machines work in tandem with our pumping appliances to provide many thousands more litres of foam than was possible before.

"If we were tackling a major emergency this kit could be the difference between a quick conclusion to the incident, and millions of pounds worth of damage and disruption. Ultimately it could also save lives"

The new equipment will be supported by two ground breaking projects which will revolutionise the use of foam.

All fire and rescue services are well aware of the need to use foam, but also the environmental damage it can cause by running off into waterways or soil. This means that foam can only be used in emergencies, severely limiting opportunities for essential training.

London Fire Brigade is now developing a memorandum of understanding with the local water supply and sewerage service, giving assurances about how the Brigade will store, transport and use foam at our stations. The new clear position, taking into account both the need to protect the environment and the people of the capital, is leading to the introduction of fire station based foam training later this year at agreed sites. This will involve using low impact training foam compounds.

In addition, twelve specialist officers – the 'bulk media tactical advisors group' – have also been introduced to provide incident commanders with the best available advice. The group, on call 24 hours a day, provides guidance to ensure the operational effectiveness of bulk media like foam, whilst considering the environmental impact of its use.

Jim Knighton continued: "London will really benefit from backing up the right equipment with the right expertise and procedures. Next on our agenda is research into the foam concentrates available on the market with a view to finding new products that offer good performance while reducing environmental impacts."

"New foams have the advantage of being used at a single 'proportioning rate', meaning that it isn't necessary to increase foam concentration on fires involving polar solvents, for instance. Alongside improving the safety of our crews, this could also lead to financial savings."

LFB is also exploring the effectiveness of a dual media extinguisher which will provide a large scale dry powder capability and a dry powder/foam dual media nozzle.

London's new bulk foam units will be based temporarily at Finchley, Sutton and Barking fire stations.

The new bulk foam units form part of the Brigade's proposals in the fourth London Safety Plan. LFB intends to establish four incident support centres at Harrow, Kingston, Beckenham and Barking fire stations. Each will group pump ladders, bulk foam units (except at Beckenham) and hose layer lorries, and in the longer term LFB will also consider adding high volume pumps and bulk water carriers.

Technical information

The new bulk foam unit is based on a 26 tonne Mercedes Actros chassis with a rear mounted Moffett Mounty M9, used to load and unload the foam concentrate.

Other features include air conditioning and commercial satellite navigation system.

The unit is primarily for the delivery of foam concentrate and ancillary equipment

8000 litres of low expansion foam concentrate is carried in eight intermediate bulk containers (IBC) each containing 1000 litres.

1000 litres of Hi-Ex foam will be carried in an IBC

Two stillages carried on the bed of the vehicle provide stowage for ancillary equipment including foam generators and monitors.

Two x foam monitors capable of producing 2000 litres per minute are carried. These will shortly be supplemented by two x 4500 litres per minute monitors.

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