

# Moorgate train accident

February 2015 is the fortieth anniversary of the most serious train accident on London's underground. **Tony Moore** describes the events surrounding the six-day rescue and recovery operation

A call to the London Ambulance Service (LAS): "Send an ambulance to Moorgate Station, a train driver has been injured," signalled the start of the search and recovery operation nearly 20 metres below ground level at Moorgate Underground Station in London, UK.

Moorgate was at one end of a branch of the Northern Line; thus there was a dead-end tunnel at the terminal end of the platform. What no-one knew at the time was that a six-carriage train had sped through the station and ploughed in to the wall at 30 to 40 mph. Nearly 40 metres of train had been compressed into just under 22 metres of tunnel and it was estimated that there were around 300 people on the train.

## Wreckage

The front carriage was in a 'V' shape with the front and rear ends facing up towards the roof and the middle still at ground level; the second carriage had ploughed underneath the rear of the first carriage and the third carriage had forced itself over the top of the second one. The emergency services built up their resources when the enormity of the accident became apparent and, over the next six days, a total of 1,324 firefighters, 80 ambulance personnel, 240 police officers, 16 doctors, 10 nurses, and numerous others from ancillary services took part in the operation. A joint services command area was established consisting of major incident vehicles from the City of London Police (CLP), London Fire Brigade (LFB) and the LAS. Assisted by officers from the CLP, the British Transport Police (BTP) assumed responsibility for operations inside the station and a joint services forward command post was set up on the platform where the incident occurred.

Communicating with crews working underground was a problem; field telephones between the major incident command area and the forward command post were installed.

The first ambulance to arrive requested for a doctor – there were no paramedics in those days. A casualty officer from St Bartholomew's Hospital, accompanied by a medical student and a first-aid bag arrived,



assessed the situation and called for a resuscitation team, followed by a site medical team, then a further site medical team.

A medical post was established in the middle third of the second carriage. From there, seriously injured casualties were passed along the tunnel by a chain of firefighters and taken to an emergency resuscitation area on an adjacent platform.

The conditions were appalling. It was pitch dark and using their torches, rescuers had to edge their way over and alongside the wreckage, sometimes with 50cm or less space between the train and the tunnel wall.

While live casualties were known to be in the wreckage, LFB used cold cutting equipment but once all the injured had been removed, flame cutting equipment was brought into service. However, this used up air supplies in the tunnel and, at a fairly early stage, the smell of decomposing bodies mingled with the heat and smoke. This situation was eased when engineers installed a ventilating ducting system and power fans. In spite of this, the atmosphere deteriorated steadily.

By midday, 70 casualties had been removed; in the next three hours a further 11 were rescued

by which time it was believed there were only two live casualties right at the front of the train. One was a young policewoman – a firefighter squeezed through a small gap in the wreckage to her and stayed with her until she was rescued.

The next four days saw a very slow recovery operation as it was essential for investigators that the front of the train where the driver's body was located should be recovered without further damage.

By the third day 26 bodies had been removed from the wreckage and it was believed that 15 remained. The heat in the tunnel did not allow normal rigor mortis to occur; bodies had swollen considerably and exposed skin was blistering; damaged parts were beginning to break open. This swelling meant they became more secure in their trapped position, hampering removal.

Despite the air forced down from the surface, the oxygen content of the tunnel was sometimes as low as 16 per cent. Workers physically engaged in the recovery operation were only allowed to work for 20 minutes below ground, followed by 40 minutes at ground level. On the fourth day, all those physically involved in the recovery operation were directed to shower and don a complete set of new clothing before leaving the scene. Showers were set up immediately outside the station and discarded protective clothing cleaned and recycled.

On the fifth day, the final bodies were removed. The driver's body took some considerable time to remove, in an attempt to try to preserve any evidence. The sixth day saw the removal of the wreckage and the recovery of all equipment.

To this day, investigators are still unclear as to the cause of the accident.

■ Read an extended version of this article at [www.crisis-response.com](http://www.crisis-response.com)

## Author

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*The Moorgate Tube crash: London Ambulance Service provided rescuers with 'shell' dressings soaked in antiseptic, secured around the mouth and nose, to reduce inhalation of dust and foul air A police officer said: "It was like trying to work in a sardine can." A doctor said: "If there's a hell, I've lived to see it."*

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