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Essex County Fire & Rescue

Brigade Lends Expertise at Fire

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Mark Samuels, an Assistant Divisional Officer with the Essex County Fire & Rescue Service within the UK, worked a fatal car fire investigation past midnight on December 11, 2005. He longed for a couple more hours of sleep when his wife awoke him at 8 a.m. that Sunday. "She turned on the portable TV in the bedroom," Mark said. "I'm sitting there with a cup of tea trying to open my eyes up. I was thinking about the night before, how it could have gone better, re-analyzing it in my mind." Suddenly, the image of an oil terminal ablaze filled the television screen. "I thought 'Blimey, is this Iraq?' Have the insurgents broken through? I was worried about our troops. Then this news crawl began crossing the bottom of the screen. It said 'Buncefield Oil Terminal ...'" Mark choked violently on his tea. His wife asked what was wrong. The burning terminal on screen was in the next county, Hertfordshire. "She said 'Well, it's not in Essex - you won't be going.'" Within hours, Mark would be en-route to the Buncefield disaster. Those hours would be spent activating plans and procedures laid down in advance by the Essex CFRS for just such an emergency.



Covering more than 988,000 acres with a population of 1.6 million, Essex is one of the largest county fire services in the U.K. The county contains many different industrial fire risks, including oil and gas terminals, a power station, airports and docks. Many years before Buncefield, Essex firefighters had a full surface fire on a burning naphtha tank at a refinery. An outcome of this event was that all parties had to be more efficient in tackling full surface fires. Essex joined with Mobil and Shell to create a mutual aid alliance. Mobil bought a Williams Fire & Hazard Control 10 Gun, Shell bought a WFHC 6 Gun and Essex bought large-diameter hose for water relaying.

Essex also sent officers to the annual WFHC foam school in Beaumont, TX, for training. However, as time passed, key participants in the alliance either retired or moved on. But, even though Shell decided to downgrade its refinery in Essex to a distribution terminal, the three-way mutual aid stood strong. The only change was that Essex was given the 6-Gun and the decision was taken to store it alongside the 10-Gun at BP. They both now sit on covered skids, along with foam concentrate and large volume hose, all used as part of a hook and drag system. The System utilises the 'Office of the Deputy Prime Minister's' (ODPM) Prime Movers, which were given to the Service as part of the 'New Dimensions Package.'

Essex Fire and Rescue Service has three mobile bulk petrochemical firefighting foam units -- two tankers and an IBC carrying lorry -- dispersed around the county. These are in the process of being replaced with a modular system, as above. The replacement store of petrochemical firefighting foam is kept at its station in Grays. When Mark transferred there, as the Station Commander, he found that he was expected to know something about foam and what it could do. "You were supposed to know everything about petrochemical firefighting because you walked in the station door," Mark said. "It was an uncomfortable position for a while." When he met with the experts on industrial firefighting, the language they talked was almost unintelligible, he said. "I didn't fully know the difference between a floating roof and a cone roof," Mark said. "I was just an old structural firefighter. So something had to be done about this. I found some books and started studying on my own. Now I can almost hold my own on a few things with industry experts."

In the U.K. fire service, the decision making process is heavily reliant on formal proposals being drafted and submitted for official approval. Mark submitted a proposal through proper channels to have Essex send him to the WFHC foam school. No one had been sent for some time. "I said 'If you want to do a good job assisting our partners in this industry, you have to invest in training'" Mark said. "After considering other reasoned arguments, they decided to send me. Williams gave me the theory and a great deal of practical experience."

Back in the U.K., Mark furthered his education by again contacting experienced industrial firefighters to study subjects such as storage tank construction; such as Arnie Arnold at BP, Ray Cole at Kaneb Terminals and Pete Smith at VOPAK Terminals. Dr Niall Ramsden at Resource Protection International and Kelvin Hardingham (WFHC) were also a great help in trying to understand this subject. He also studied videos of how past industrial fires had been handled. However, one increasing problem for Mark was balancing his new interest in industrial fire



fighting against the time consuming problems of administering the 60-member fire station in Grays. About this time there was a renewed interest in industrial firefighting from the top of the Essex organization. "We got a new Chief Fire Officer named David Johnson, who has been a breath of fresh air," Mark said. "He came in, saw that we had these risks, and even before Buncefield he said 'We've got to do something about it.'" A new paper was drafted to be submitted to principal management. In it, Mark explained that the money invested in sending him to WFHC for training would be wasted in the long term until he was given time to keep his skill level up. The result was Mark being promoted to Temporary Divisional Officer for one year in the position of Service Petrochemical Officer. "They gave me the position for a year and at the end of the year I will have to write another paper outlining the reasons why it should be continued indefinitely," Mark said. But, before Mark could assume his new position, Buncefield happened. "The first thing I did after I spat out my tea was call the control center for Essex," Mark said.

In the U.K., the number to call in emergencies is 999. Immediately after the start of the Buncefield emergency, Hertfordshire Control became overwhelmed with calls. Procedure requires that calls going unanswered at Hertfordshire Control to be re-routed to other nearby 999 control centres. Essex Control was already getting a number of those calls. "Hertfordshire had not officially asked for any assistance yet," Mark said. "My next call was to the Service Duty Officer. That was Steve Couch,

the Assistant Chief Fire Officer. He asked me for my recommendation. I said we should be thinking about what equipment and personnel we could send, if asked. I was asked to come up with a list that would not leave Essex County too short." A normal mutual aid response would have involved 25-to-30 percent of Essex's resources. The list that Mark drafted involved between 60 and 70 percent of Essex's resources.

Mark contacted Arnie Arnold at BP to be sure that the 6-Gun was operational and ready, as it usually is, to travel. Spotting an opportunity to test our new mobilising procedures with the ODPM prime movers, Chief Officer Johnson ordered that Essex's 6-Gun be moved to a single rendezvous. The rest of the equipment and personnel would remain at their 'home station' until a formal request for assistance was received from Hertfordshire. Harlow, the town where Mark lives, was chosen as the rendezvous as it has good links to the motorway network. Mark was on his way to BP to meet Arnie Arnold and to oversee the movement of the 6-gun, when the formal request from Hertfordshire came through for assistance. Essex issued official orders to mobilize. While most of the fire appliances being scrambled for the Buncefield fire moved one way down the M25 motorway, Mark, driving a vehicle equipped with a blue light, was traveling in the opposite direction to reach BP. "They were all looking at me like 'Where's he going?'" Mark said. "'He's running away.'" Mark laughed to himself. And said "see you shortly guys..."

At BP, special care was taken to make sure that everything needed to operate the 6-Gun would be packed. "There's nothing like checking and double-checking," Mark said. "We went through it with a fine toothed comb. Everything was organized like a mechanics toolboard, to ensure we'd have all the adaptors and couplings ready to go." Once the equipment check was completed, the hook and drag system was employed to move the skid mounted 6-Gun for transport. Once the 6-Gun, along with key BP personnel, reached Harlow, all the equipment on Mark's list was ready to go.



Meanwhile, in Harlow, catering arrangements were being made. Two shopping carts full of sandwiches and soft drinks were purchased at a local supermarket. Firefighters were instructed to eat some and store the rest in their fire trucks as the timing of the next meal was uncertain. For the next three days, Essex would play a key role in fire ground operations at Buncefield. The steps taken in anticipation of the official request to join the Buncefield operation put Essex in the position to offer crucial aid and assistance. Before departing for Buncefield in advance of the

Essex firefighters, Mark took the opportunity to give them a final pep talk.

"Guys, we're part of the biggest fire operation in British history," Mark said. "I haven't got a clue what we'll be doing today but I guess you may be telling your grandchildren about it some day."

Following on from Buncefield, Mark has been working with JOIFF to form links with the petrochemical industry in order to advance the partnership between 'municipal' and 'industry' fire services. Also, CFO Johnson has taken up the role as the Chief Fire Officer's Association (CFOA) lead in this arena. This will ensure, at a strategic level, the continued success of joint partnership working. Mark would be pleased to receive comments or questions on the following email address: mark.samuels@essex-fire.gov.uk.