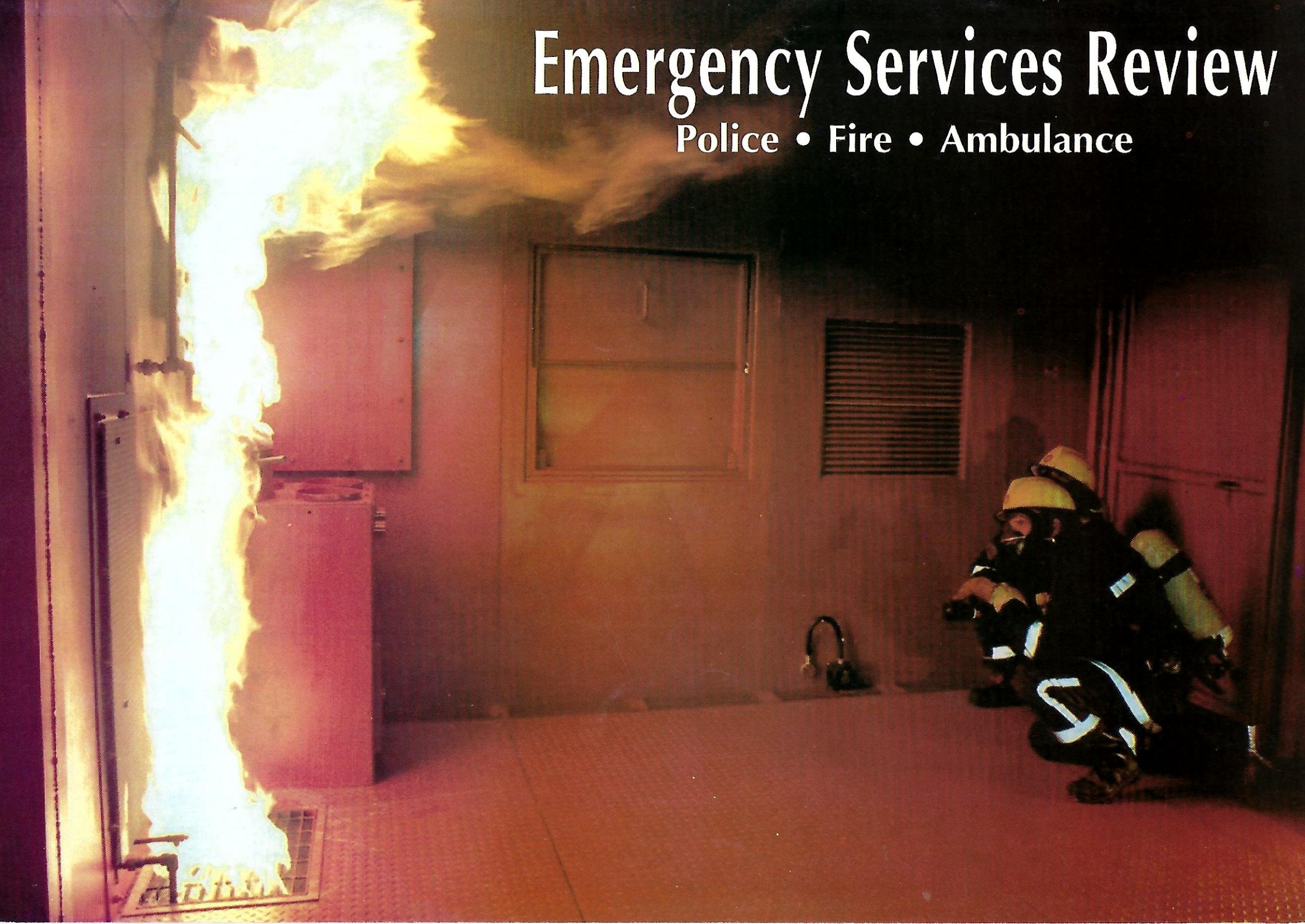
Emergency Services Review

Police • Fire • Ambulance



REVIEW

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Avon Fire Brigade's new state-of-the-art Hot Fire Training Centre at Brislington Fire Station

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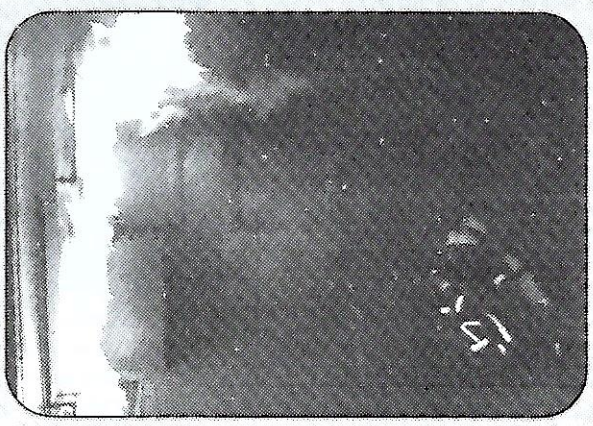

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Fire Authorities Need
A Corporate Service Approach

The recently announced Local Government Financial Settlement for the Fire Service in England and Wales will produce difficulties but also challenges for a number of fire authorities. In addition to this year's settlement of 3.6%, we now have indications that the settlement for the next two years will be in the same region of 3.5% per annum.

Fire Service inflation has been running above this level, exacerbated by a pay settlement for firefighters of 5.6%. In addition the continuing rising cost of the Fire Service Pensions Fund will mean that a large number of authorities will be committing over 20% of their revenue budget in future years to cover the pensions deficit.

It has often been portrayed in recent months that fire service employers object to firefighters receiving high pay increases and want to abandon the formula that was arrived at following the strike in the 1970's because it has led to making firefighters too highly paid. I want to emphasise that this is not the case. The vast majority of employers do not object in principle to firefighters receiving salaries commensurate with the difficult job they undertake. We do however voice our concerns when, for whatever reason, increases in salary are outstripping increases in resources to fire authorities.

Changes in structure over the past few years now mean that the vast majority of fire services in England and Wales are single purpose authorities; either Fire and Civil Defence Authorities (FCDA's) in the Metropolitan areas which precept their unitary authorities for any increase in council tax or Combined Fire Authorities (CFA's) which levy their unitary authorities to make up any shortfall created as a result of the local authorities settlement and the deficit created by the increase in both pensions' pay.

Due to the changing status of fire authorities many are now under pressure from the unitary authorities to keep the precept or levy as low as possible because an increase in either will have an effect on the overall level of council tax passed on the council tax payers.

Whatever course of action fire authorities take to meet both the aspirations of our employees and to maintain the adequate level of standard of fire service delivery that the public has come to expect from the British Fire Service, there are a number of other factors that will need to be taken into consideration. Firstly, the Government has indicated that it has retained reserve powers of capping on local authorities (including fire authorities) whom they consider to be profligate in the level of council tax increases that they make. In addition, the Secretary of State for the Department of the Environment, has announced that any council tax increases over 4.5% will be subject to council tax benefit claw-back, rising to a threshold at 8.5% whereby all council benefit payments from Central Government will have to be absorbed by the individual local authorities. Clearly this will affect fire authorities, either in the form of direct claw-back in the case of the FCDA's or indirect claw-back in the case of CFA's and those who remained as part of unitary authority county councils.

Fire Authorities will in the short and long term have to demonstrate that they are taking adequate measures to ensure that their income is maximised and their expenditure is realistic and controlled to satisfy central government that any increase in the precept or levy for council tax is justifiable and that all measures are being undertaken to reduce unnecessary expenditure.

The Secretary of State has made it clear that Best Value will apply to the Fire Service and that it will not be sufficient for the Service itself to say that it has either provided Best Value or point to the Audit Commission reports "In Line of Fire" indicating that we are a well managed service. There are clearly ways in which the service itself will be able to fulfil Best Value criteria and needs to take action in the short and the long term to reduce overall expenditure.

Whilst the Service may be stretched and unable to make large areas of savings from the front line service, there are other areas in which savings can be accrued. Individual fire authorities will have to cease to operate as independent bodies, but instead look at a corporate service approach in areas such as training, mobilising control, and in some sections of administrative operation.

The service as a whole already has an over-capacity of training facilities; new and modern technology means that mobilising can take place at fewer control points than has previously been required and the very often macho individualist approach of fire authorities that each must have their own individual controls (usually under-occupied and overstaffed) needs to be declared a thing of the past. Fire Authorities need to be willing to enter into corporate arrangements for joint controls and for a rationalisation of training facilities. These are only illustrations and not definitive areas where rationalisation in the fire service needs to take place.

Whilst there is no wish amongst fire service employers to abandon the fire service pay formula which most people would agree has worked well in maintaining industrial peace over the past 20 years, there has to be a willingness to recognise that the terms and conditions under which the vast majority of local government employees are now operating, have changed greatly over the course of the last twenty years.

Whilst it can be readily accepted that the formula itself has not created pay differentials out of proportion to that received by most other local government employees over that period of time, most other local government employees have seen changes in their terms and conditions which have justified the maintaining of current pay settlement levels, an alteration which has not yet been accepted in the British Fire Service. Unless there is a willingness in the near future to accept that the current Terms and Conditions are out of kilter with that of the rest of local government and Pay and Terms and Conditions continue to be treated as two separate identified negotiable areas (something that in the rest of local government ceased several years ago) it is unlikely that the local fire authorities will be able, under present financial controls, to maintain a commitment to both.

The Fire Service is at the cross-roads. Traditionally the Fire Service, both Managers and Employees have been living in a cocooned existence that has been protected by the Employers and Central Government, either through emotional loyalty to historic agreements or fear of challenging the status quo.

Unless we tackle some of the historic dinosaurs that we have created, we are going to be unable financially to continue to operate a fire service that is acceptable to the British public and their sympathy and understanding will slowly but surely disappear.

Cllr A. Ritchie, Leader LFCDA Labour Group

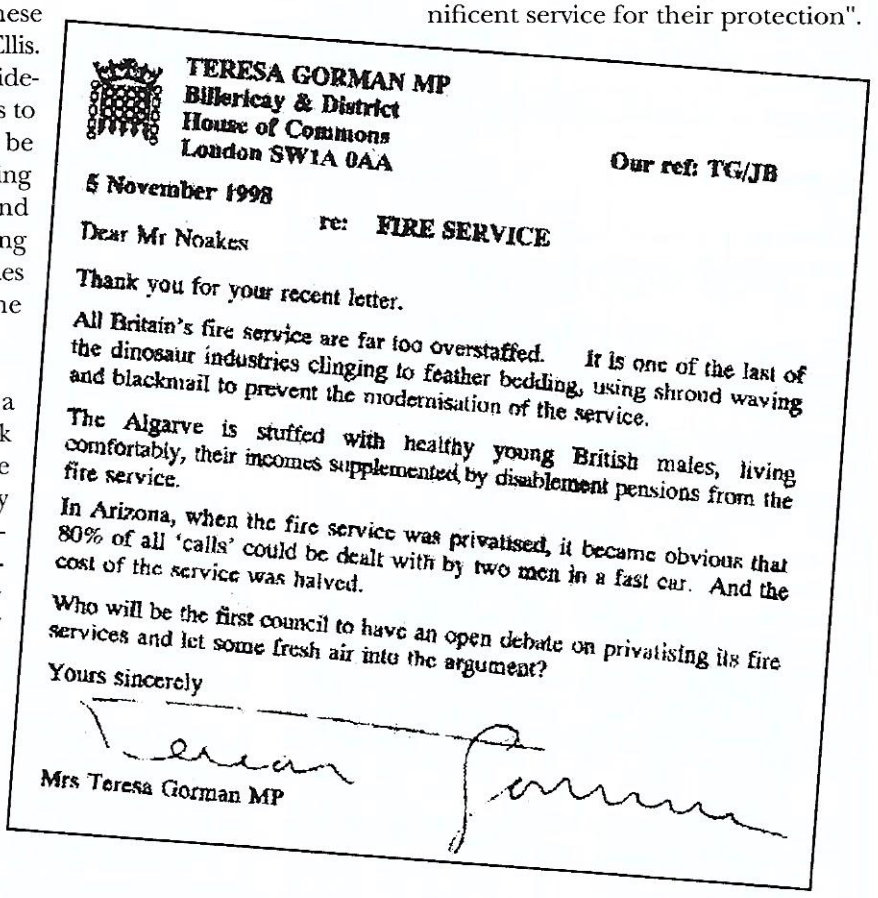
FIRE OFFICERS FURY

"It's a shame it has come to this" are the words of Alan Ellis, President of the Fire Officers' Association, in response to Teresa Gorman's comments reported in the Daily Mirror (Wednesday, December 2, 1998) when she said: "Firefighters were shroud waving dinosaurs who use blackmail to protect their jobs".

"The timing and lack of sensitivity of these comments are most unhelpful" said Alan Ellis. "The real issue is that funding and the guidelines laid down by Central Government as to how we deliver the service do need to be looked at. We (FOA) have said we are willing to join negotiations with others to try and address some of the issues which are putting pressure on the Fire Service nationally, issues which have been made manifest in the industrial unrest in Essex".

"What is most disappointing is the timing a senior member of parliament uses to attack the Fire Service " said the President of the Fire Officers' Association. "Firefighters by nature are people of integrity who are committed to public service. There is a realisation that some areas of our service delivery can be modernised. It is for members of parliament to create the climate in which these discussions can take place. To actually suggest that two Firefighters in a fast car and privatisation, is the answer, is not only naive but dangerous".

It is interesting to note Teresa Gorman's comments in May 1996 when the House of Commons debated the problems facing the Fire Service, then under a Conservative Government, when she said: "They (Labour controlled Councils) are clearly under-funding it (The Fire Service) all over the country and it is causing great concern to the service and to those who rely on that magnificent service for their protection".



TERESA GORMAN MP
Billericay & District
House of Commons
London SW1A 0AA

Our ref: TG/JB

5 November 1998

re: FIRE SERVICE

Dear Mr Noakes

Thank you for your recent letter.

All Britain's fire service are far too overstaffed. It is one of the last of the dinosaur industries clinging to feather bedding, using shroud waving and blackmail to prevent the modernisation of the service.

The Algarve is stuffed with healthy young British males, living comfortably, their incomes supplemented by disablement pensions from the fire service.

In Arizona, when the fire service was privatised, it became obvious that 80% of all 'calls' could be dealt with by two men in a fast car. And the cost of the service was halved.

Who will be the first council to have an open debate on privatising its fire services and let some fresh air into the argument?

Yours sincerely

Mrs Teresa Gorman MP

A FITTING TRIBUTE TO ~FLEUR~

A Fund set up to commemorate firefighter Fleur Lombard, the first female to be killed in active service, has allocated a significant sum towards the construction of a new gymnasium at Jubilee House in Penrith.

The Fleur Lombard Memorial Fund was set up by tabloid newspaper The Daily Mirror in the wake of Fleur's tragic death and received tremendous public support. The Fund eventually raised £68,000 to be used in Fire Service related projects.

Jubilee House is a high profile recipient being the first purpose - built therapy centre for the benefit of fire service personnel and their partners.

Lincolnshire firefighter Erica Hinnigan who spent the tail end of the year at Jubilee House undergoing a course of therapy following an accident, said: " The facility has been a great help and greatly accelerated my recovery."

Her support for the centre is echoed by her CFO John Herrick, Chairman of the Fund, who said: "The loss of a firefighter who dies whilst firefighting is devastating to the whole community. That Fleur's name is to be remembered in this way is a positive and helpful thing. Jubilee House helps so many injured firefighters return to full and active health.

This in turn ensures our communities continue to be protected by these brave people from whom we expect so much."

FSNBF

Covenants - is it your shout?

Readers of In Attendance may be among the many who are interested in making a Deed of Covenant to support the Fire Services National Benevolent Fund.
Covenants have an image of an older, more legalistic, world about them. Arranging to give to your favourite good cause in this way can seem too complicated.
But covenanted donations are worth a lot to charities. Each year, the Inland Revenue gives back about a quarter of a billion pounds in tax relief, making this charities' most valuable tax concession.
Staff are often asked about this increasingly popular, but sometimes misunderstood, way of giving to the Fund.
To give you a rough idea, the FSNBF have put together a simple question and answer guide.

Q. What is a covenant?

A. An agreement where you promise to pay a set amount to a charity like the Fund each month, quarter or year for at least 4 years. It increases the value of your gift by almost 30% without costing you a penny extra.

Q. How does it work?

A. If you are a tax payer*, the Government deducts tax from your income. By choosing to give by covenant the Fund can claim back from the Inland Revenue the tax you paid.

For example, if you make a covenant to the Fund of £100 per year, this attracts a further gift of £30 from the the Government. So over the course of a year, instead of just your £100, the Fund actually gets a total of £130.

Q. Can anyone do it?

A. Anyone who pays UK income tax can enter into a covenant. Already over 12,000 members of the Service have chosen to support the Fund by signing a Deed of Covenant - many by deductions from salary. Family and friends can also support the charity in the same way too.

Q. Is covenanting more popular with some brigades than others?

A. Yes, in some Brigades more than 90% of staff have signed up, while in others, there are none.

Q. So why does the fund need more people to covenant?

A. Jubilee House is a purpose-built Rehabilitation and Therapy Centre opened exclusively for the benefit of Fire Service personnel and their dependents in 1995. It is consistently achieving excellent results but costs the Fund nearly £1 million each year to run. Covenanting is one of the best ways for Service personnel to support the work of this vital centre.

Q. How do I make the payments?

A. Payments can be made by monthly, quarterly or annual Standing Order, cheque or by deduction from your salary or pension.

Q. How much shall I give?

A. How about £30 a year or more it you can afford it? That's only 2.50 a month - not much more than the average price of a pint of lager in the UK**

Q. What if I pay a higher rate tax?

A. Higher rate taxpayers receive extra relief claimed through their tax return.

Q. What if I lose my job, or fall ill?

A. If your financial circumstances deteriorate we can release you from the covenant.

Q. What if I die?

A. Your covenant is immediately cancelled.

Q. What if I already covenant, can I increase my giving during its four years?

A. Yes, you can take out a new covenant for a greater amount.

Q. What if I'd like to make a 'one off' gift?

A. If it's £250 or more the Government's "Gift Aid" scheme enables the Fund to claim the tax back in full straight away! Gifts under £250 can be covenanted using the "deposited covenant" procedure. The fund can provide you with all the necessary paperwork and advice needed.

Q. Having decided to make a Covenant, what do I do next?

A. Please fill in the Deed of of Covenant Form and the Bakers Order which you will be given. Sign them, have the Covenant witnessed and give both forms to your local Fund representative or send them directly to the Fund at: Fire Services National Benevolent Fund Headquarters, Marine Court, Fitzalan Road, Littlehampton, West Sussex BN17 5NF.

If you have any more questions, speak to your station Fund representative or phone 01903 736063

** Tax payers in the Channel Islands or the Isle of Man are advised by the Inland Revenue to support the fund through general donations.*
*** Brewers & Licenced Retailers Association*

COVENANTING

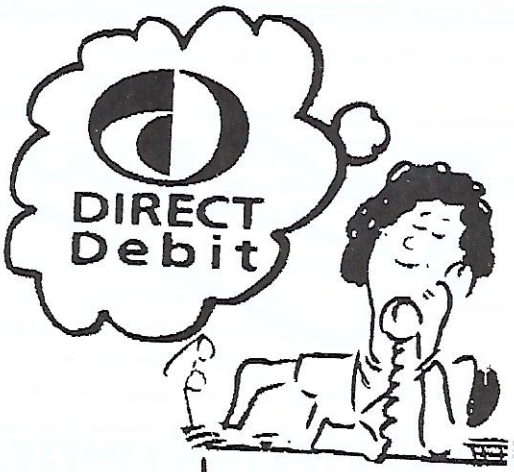
Kirklees
METROPOLITAN · COUNCIL

A BETTER WAY TO PAY YOUR BUSINESS RATES

Paying bills needn't be an uphill struggle - make life easier, use DIRECT DEBIT.

Almost 30% of Kirklees Business Rate Payers will already have DIRECT DEBIT payments set up to spread over 10 months.

MORE TIME TO PAY...This year, Kirklees Council can offer an extension of instalments for Business Rate Payers who choose to pay by DIRECT DEBIT. Why not spread your payments to March 1999? Simply choose the easier way to pay.



If you already pay your Business Rates by DIRECT DEBIT and wish to extend your payments, simply ring 01484 223972 to arrange.

DIRECT Debit

Forms are available from:
THE BUSINESS RATES SECTION
PO BOX 338
CIVIC CENTRE 1
HUDDERSFIELD HD1 2YS
OR BY RINGING 01484 223972

financial operations service
OUR AIM IS YOUR ACCLAIM

99002 / 2.2

SOUTH YORKSHIRE'S

REALISTIC APPROACH TO FLASHOVERS

Twenty one British firefighters have lost their lives at operational incidents over the past 11 years, many of them as a direct result of a flashover.

South Yorkshire Fire & Rescue Service CFO Jeff Ord reflected widespread concerns recently when he described flashover as 'a fire phenomenon which is both deadly and mysterious.

"Fire laboratories have studied the nature of flashover for many years and tried to isolate the lethal elements in an attempt to protect the firefighters who have daily to deal with its dangers," said CFO Ord who is convinced that firefighters must be trained to read the warning signs of an imminent flashover and how to deal with it safely.

This has resulted in the South Yorkshire service's commissioning of a new facility, opened by HRH Duke of Kent, KG on 26th November 1998.

The new facility offers specialist training in a modular form. The first module comprises theoretical training and information which is reinforced by demonstrations on a flashover simulator. When they are fully conversant with the theory firefighters are then asked to put what they have learned into practice by undertaking a series of practical exercises inside the brigade's unique Realistic Fire Training Building (RFTB).

The RFTB is the first of its kind to be built in the UK and unique in that by creating the characteristics of flashover in a controlled environment it becomes an extension of the fire laboratory.

'Fire Houses' have traditionally used wooden crates and straw to create blazes and enable firefighters to acquire realistic training skills. However, environmental concerns with air and ground pollution are now limiting such training programmes and emergency Fire Services are looking for alternatives.

South Yorkshire's new facility at its Brigade Centre in Sheffield has fires that are fuelled by Liquefied Petroleum Gas (LPG). The fire training afforded is not only environmentally acceptable but by using LPG fuelled simulators the Service can accurately simulate flame signatures and fire intensities.

The LPG is released through a network of gas supply pipes and through several inches of water before it it ignited. This creates a flame that can be altered to replicate a variety of fire situations. The clean burning properties of LPG are complemented by non toxic, non polluting mineral oil based smoke vapours.

Of course, while the environmental issues are significant, safety and control are equally important. Each unit has a 'burner safety system' controlling the pilot light for the system which in turn is monitored by sensors which automatically cut off the flow of LPG su unburned gas cannot escape. There is also a separate 'kill' switch that is controlled by the Instructor.

Technical Background

The fire situation building has been constructed of seven fire modules, each measuring 40ft by 8ft by 8ft 6ins (12.2m x 2.4m x 2.6m). A purpose-built tower has been constructed with an internal stairway and lift motor room. The facilities are capable of simulating the following fire situations:-

- small domestic dwelling (to include bunk / settee situations)
- small industrial unit (to include cooking range)
- stairway / lift tower and motor room with dry riser
- flame rollover facility.

The outside of the building has been fitted with two roofs. These have a properly defined ridge with a mounted chimney. One of the roofs has its eaves not more than 4ft (1200 mm) above the ground for safe access and to enable Recruit Firefighters to practise roof pitches in safety.

Safety

The modules will be monitored constantly from a control room that is integrated with building. It contains a control panel which is capable of monitoring functions in every module, including temperature levels at recommended heights.

It also has the capability of adjusting the temperature rating up or down and if necessary can shut down the installation instantly, in whole or in part, should an emergency occur.

The following training will be available:-

- induction courses for Recruit selection to test an individual's ability to work in darkness.
- Recruit Firefighters training.
- advanced / experienced firefighters training
- provision of industrial training for outside organisations.

The installation also includes:-

- movable scenarios in order that firefighters do not become complacent with the facility.
- temperature monitoring.
- the ability to adjust flame height.
- the ability to re-ignite the flames to give repeated fire fighting practice.
- the use of smoke generators to facilitate search and rescue techniques.

South Yorkshire Fire & Rescue Service is confident that the new fire house will not only increase the safety levels of its firefighters but their skill levels too, well into the future.

NT RESQ BAGS

ZUMRO BV. THE NETHERLANDS

Zumro has recently supplied its range of New Technology ResQ Bags to no fewer than six UK brigades - Cleveland, North Yorkshire, Hampshire, North Wales, West Yorkshire and South Yorkshire.

The firm believes that the bags have revolutionised the world of high and low pressure lifting devices. Made using a combination of very light composite materials, which have proved their durability and strength in the aerospace industry, and with a unique design, the NT ResQ Bags afford hitherto unheard of levels of versatility and handling.

Zumro BV has combined the technology of high pressure bags with the lift capability of low pressure bags. Obviously, when a product purports to combine two disciplines in one, that product should be good enough to be chosen for each separate application in its own right. Zumro argue that international acclaim and reviews suggest that NT ResQ Bags outperform any high or low pressure bag available on the market whether it is used for trench rescue, structural collapse or lifting of vehicles and aircraft.

NT ResQ Bags are available in 3 sizes : 23,58 and 132 tons lifting capacity. When deflated the NT bags are round with an integrated metal plate at the top and bottom of each bag. Aramid fibres are wound onto high tenacity rubber to create a robust yet very lightweight construction. At its centre is a screw - in play (requiring a T - bar handle for removal) into which a connector plug can be screwed to join it securely to another NT - bag. The bags are fully modular and can be interconnected to reach any desired height.

The connector plugs can be either open or closed. When a closed plug is used each bag requires independent inflation whereas an open connector will cause all connected bags to inflate and deflate as one unit. Depending on the situation, the operator has the option either to use the stack bags secure in the knowledge that they are acting as a single supporting column.

The bags are inflated via a small hand controller which gives one handed inflation and deflation control. There are two outlet ports feeding two different coloured hoses. All hose connections are a push button, two stage release - press once and the coupling releases a few millimetres of the male without allowing air to escape, push again and the male and female couplings separate. A point load plate fixed on the top bag allows the operator to lift heavy loads concentrated as a point load.

Features which distinguish the NT ResQ Bags include: -

- *Combining the advantages of low and high pressure lifting devices*
- *the impressive lifting height.*
- *connectable modular system*
- *lightweight construction*
- *point loads can be lifted*
- *no cribbing necessary*
- *stable stacks and columns*
- *quickly and easily operable*
- *versatility - rescue, maintenance, recovery and lifting capabilities*
- *surface area does not decrease with inflation*
- *durable (self seal outer rubber layer)*
- *suitable for confined spaces*
- *very little storage space required*

Technical details

	NT - 23	NT - 58	NT - 132
Weight (kg)	7.0	16.0	30.0
Lift (mm)	275	445	665
Operating Pressure (Bar)	10	10	10
Max lift capacity (kg)	23.000	58.000	132.000
Min diam. inflated (mm)	400	658	1000
Max diam. deflated (mm)	540	865	1300
Water volume	20	99	350

The NT - bags are currently being used worldwide for rescue, in earthquake calamities and as recovery systems for aircraft and for maintenance operations. A true all - rounder in every aspect.

Update

Following the recent acquisition of PSE UK Ltd and Zumro Ltd. by Britax International Plc. the company has vowed to retain its place at the forefront of the rescue field. A major part of this commitment will be increased investment in infrastructure and research and an extension of Zumro BV's role in the domestic market. Zumro BV Managing Director Mr. A.J. Maarschalk will be liaising closely with Phil Griffin in the UK in order to bring this policy to fruition. The changes took effect as of December 1, 1998

On The Move

IFTE is continuing its live demonstrations of the propane fuelled Mobile Fire Extinguisher Trainer which received its launch at Fire '98.

The stainless - steel built units which provide training for Class A,B and electrical fires are suitable for personnel at all levels. Instructors have complete control over the fire scenarios at all times via an operator's pendant.

The new models feature a TV fire as standard and offer optional interchangeable electrical fire scenarios including a fuse box fire, a VDU fire or a socket fire which is given added realism by the addition of a pyrotechnic flash unit.

IFTE have just completed work on a retrofit of the Hot Fire Training facility at Edinburgh Airport where a new three storey drill tower and gas pan have been fitted.

The retrofit provides the airport simulator with three LPG fuelled scenarios - a three seat fire, a flashover rail and galley fires. A gas pan measuring 5m x 2.5m has also been constructed on the fire ground to simulate a fuel spill situation.

Details 01509 505 005

' State of the Art' Training

The Brigade is extremely pleased with its new Hot Fire Training Centre which went 'live' for the first time in September 1998. The Centre has been built on the site of Brislington Fire Station but is completely independent of the station with a dedicated classroom block which is also equipped with changing and shower facilities on site.

The manufacturers of the building, International Fire Training Equipment and the Brigade's Project Team headed by Divisional Officer Peter Shilton, developed the unique facility in partnership based on IFTE's concept design of a similar facility for the Ministry of Defence at RNAS Culdrose in Cornwall. Funding for the Centre was approved after the Brigade's 1996 Report of its investigation into the death of Firefighter Fleur Lombard which highlighted a need for better realistic training facilities.

The two-storey solid steel structure comprises four separate fire rooms each with a different theme simulating realistic firefighting environments which includes a bedroom with flashover/back-draught options, a domestic property room, a kitchen/frying range room and a heat and humidity chamber. There are eleven different LPG fuelled fire 'beds' throughout the building, two pyrotechnic devices, a ducted smoke generation system and a door 'smoke bleed' installation for fire behaviour training which are all controlled by the latest 'state of the art' technology. Over 120 square metres of floor area is available for training plus the flat roof which are served by external staircases at each end plus a large central internal staircase that also provides a viewing gallery into each compartment through vision panels at both levels. Vertical access from the roof through each compartment is provided by hatches and cat ladders for simulating ship or deep basement scenarios.

Training in simulated conditions of realism was the main driver behind the design of the facility but safety was naturally at the forefront of all design and performance requirements which on occasions, called for the highest levels of imagination and ingenuity on the part of IFTE's electronics designers. Operation of the simulator is restricted to four specialised instructors and four non-uniformed technicians who have all been specially trained and qualified. One uniformed instructor and one technician are the minimum required to fire the scenarios which are electronically controlled to fail to safety should either person become unable to perform their role. In a training exercise, an additional instructor undertakes the role of safety officer but control of the fire beds rests with the senior instructor who remains alongside students on a ratio of 2:1. Using a hand-held pendant, the senior instructor can control up to five stages of fire development in each of three separate programmes. Each stage is pre-set within defined time or temperature limits which are computer controlled allowing exact replication of conditions to be achieved to meet that particular training objective. Radio and public address communications is maintained between instructors and the technician who is housed in an integral control room adjacent to the entrance lobby. Closed circuit television cameras also allow visual surveillance of all compartments by the technician which can also be taped on an integral video recorder primarily for de- briefing purposes, but also for impounding in the event of an emergency. High and low level temperatures are constantly monitored from the control room plus humidity in the heat and humidity compartment which are all timed and recorded to generate a hard copy print-out for personal training records. The technician also monitors gas detection alarms for the presence of carbon monoxide, propane and oxygen in unacceptable concentrations.

Realistic, standards-based training is a fundamental feature of the Brigade's strategy and this underpinned the design specification of the HFT Centre where the principles of a performance related, outcome focussed approach to training is being adopted. The ability to replicate scenarios to meet specific training objectives was identified as an essential requirement of the Brigade's training strategy and this was the primary influence in the decision to opt for an LPG fired installation. All of the Brigade's wholetime and retained personnel will be programmed to attend the Centre at least four times per year for specific training in line with the strategic training objectives for the Brigade. The compulsory use of breathing apparatus inside the simulator will enable essential BA training to be combined with other training targets so that training time in the simulator is maximised. A large proportion of recruits' basic BA training will also be undertaken at the Centre as will 'hot fire' training for recruits which will produce significant savings on the training budget.

Its unique design provides a flexible, cost effective training solution which embraces the latest technology to secure a realistic environment capable of countless different scenarios under safe, controlled conditions to provide Avon's firefighters with some of the most advanced training available well into the next millennium.

Breathing Apparatus

After fifteen years of reliable service from the Siebe Gorman Firefighter' Breathing Apparatus set, the Brigade decided to undertake an evaluation of all suitable BA sets on the market.

Following an exacting evaluation process monitored by the BA Department and the Brigade Technical Advisory Committee, the Drager PA.94 plus was selected as the new BA set for Avon Fire Brigade.

Once this decision had been made, a complex and intensive training programme was devised and launched.

Two hundred and twenty sets and six hundred cylinders were leased in association with a 'total care package' from Drager in November 1996, and the set went on the run in April 1997. Due to the co-ordinated efforts, affecting a number of personnel and departments within the Brigade, the changeover went very smoothly with no adverse effect on the Brigade' s response capability.

Bodyguard Electronic Monitoring Unit

On leasing the PA.94 plus from Drager part of the package included the Bodyguard Electronic Monitoring Unit. This has now been supplied to the Brigade and training is on going prior to the unit being introduced later this year.

The Bodyguard replaces the more conventional items on a BA set, the whistle, contents gauge and DSU with an electronic device. In addition it also contains a small computer which automatically records whenever the set is turned on as well as wearer consumption rates. This information is accessible to the wearer via an LED Display which can be illuminated at the push of a button.

The information recorded on the Bodyguard can also be downloaded onto a mainframe computer allowing highly detailed records of set usage to be stored as part of the Brigade wide database.

Use of this information to ascertain the effects of wearing a Breathing Apparatus set in operational and training incidents will lead to better controls in use of this equipment being implemented. This of course will help to promote greater safety for the wearer in due course.

Savox Communications Equipment

In order to further enhance the performance of the Drager PA.94 plus, and introduce the latest technology in communications equipment for Breathing Apparatus the Brigade have purchased and placed on the run the ' Savox 200' BM Communication System. This equipment is made by 'Interspiro', and we are the first Brigade in the UK to be using the 'Savox' Communication Equipment with the Drager BA set.

Provision has been made for two BA sets on each of our 37 Fire Appliances, to be fitted with Communications Equipment.

Once again the BA Section played a leading role in conjunction with Interspiro to develop this equipment for use with Breathing Apparatus, and together with the new Motorola GP 900 intrinsically safe radios, firefighters in Avon have been provided with up to date technology and state of the art equipment, which puts the Brigade in a good position for the future and any further developments in radio telemetry.

Joint Training Centre

In 1996 Avon Fire Brigade, Gloucestershire Fire and Rescue Service and Somerset Fire Brigade agreed to combine efforts and pool resources to build a new training centre to be shared by all three Brigades.
The Centre is being provided and the training and services procured as a Private Finance Initiative where the Brigades form a partnership with a private contractor who will design, build and
operate the training centre for the three Brigades. To this end, a project team was set up comprising officers from each Brigade with legal, property and financial advisors. The scheme was awarded Pathfinder Status by the Home Office in March 1997, and a feasibility grant awarded. In October 1998 a PFI credit approval of £9.5 million was allocated by central government for the 1999/2000 financial year.
It is anticipated that the new training centre will be situated on the M5 corridor, central to all three Brigades. Currently a short list of three companies have been invited to negotiate in early 1999. In April/May two companies will be asked to provide a best and final offer from which a preferred bidder will be selected. The project should be fully signed off by late autumn 1999 and the building will commence early in 2000.
The new centre will provide high quality practical training for firefighters with the accent on safety. Within the next 3 - 10 years there will be a larger than normal demand for new recruits into the three Brigades, and it is intended that the training of those recruits will be another major feature of the centre. The scheme is aimed to complement and not to compete with the Fire Service College, which will continue to provide specialist and career progression courses.
This centre will meet the increasing demands of core training, assessment and acquisition of skills required to achieve the joint concept of 'safe person, safe place, safe community'.

INCIDENT COMMAND TRAINING IN AVON FIRE BRIGADE USING THE VECTOR SIMULATOR

The Vector Simulation system is used as part of an Incident Command training package for all Officers, from Leading Firefighter to Principal Management, including Retained Personnel who may be required to act as an Incident Commander.

The courses are modular in format allowing each rank to work within their peer group;

Module A Leading Firefighter.

Module B Sub Officer.

Module C Station Offficer.

Module D Assisstant Divisional Officer.

Module E Divisional Officer.

Each module is a one day course which is held in the Vector Suite (attached to training department) and has up to 5 students on each course.

The course content includes;

Incident Ground Health and Safety.

The Incident Command System.

Incident management.

The Vector System.

A Vector scenario completed

as a joint exercise.

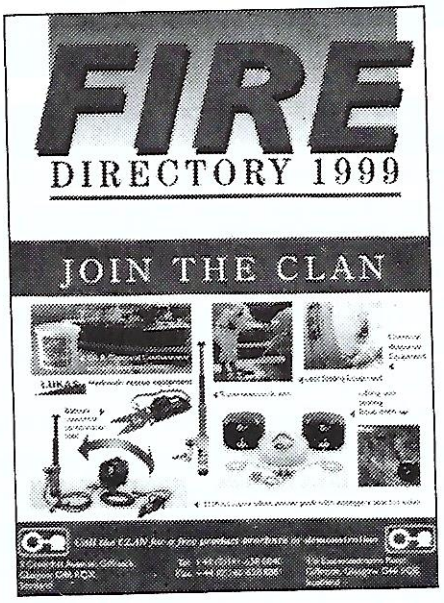
On completion of the One Day Incident Command Course the student is then programmed into a half day Vector course on a one to one basis, where the student is given the opportunity to train in Incident Command on inividual scenarios using the Vector Simulator and discussing the outcomes with the instructor ,who acts as a facilitator during the scenario, operating the Vector Simulator and allowing the student to concentrate on the scenario. To date 121 Wholetime Officers, and 83 Retained personnel have completed the one day Incident Command Course.

Station Officer Hanratty leads a student through the vector Simulator training module

DIRECTORY Enquiries

The new edition of the 'Fire Service Bible', The Fire Directory is now available, proving that not everything was better in the good old days.
Revised and updated, the 1999 Directory, known affectionately as the Yellow Book, is as ever a treasure trove of useful information. The Directory is split into 14 sections and the major changes have been reserved for the chapter on associations with coverage of the four main fire industry trade bodies being significantly beefed up. As ever the Yellow Book contains accurate, up - to - date addresses and contact numbers for all UK public and private brigades, government departments, training centres and research and training centres. The essential 'Buyers Guide' and 'Who's Who in the Fire Service' sections again appear, ensuring that the 1999 Directory maintains its position as the pre-eminent reference guide for the entire fire industry.

The 1999 edition is available priced £89.50 from DMG Business Media Ltd, Queensway House, 2 Queensway, Redhill, Surrey RH1 1QS Tel: 01737 768611 Fax: 01737 855470.



50th Anniversary Somerset Fire Brigade

An Illustrated History

Fire Brigade personnel John Godley. Paul Sweetland and Carolyn Hodge have produced a one-off illustrated history of the Somerset Fire Brigade to commemorate its 50th anniversary in 1998.
Carolyn Hodge explained: "It was decided that our celebration year would include, among other activities, a publication to record our proud history". It was the authors' intention to keep it an illustrated history with as many photos as possible, from all parts of Somerset and North Somerset, which then included Weston-Super-Mare, Pill, Chew Magna etcetera. Hence its title' Somerset Fire Brigade - an illustrated history."
Requests for photos and memorabilia were sent to all districts and retired personnel, explaining that as far as could be ascertained this was going to be the only publication of its kind in the region. The first group of photos show all the Chief Fire Officers from 1948 to date and Carolyn says: "Every item used seems to have brought to life the days gone by - the good old days. Many of the photos have a comic nature and there are even cartoons depicting the everyday life of firefighters."
Early in the year a flyer was produced utilising photos and passages of text so that they could be sent to all personnel concerned. Subscribers were also given a chance to have their names included in the finished book.
Carolyn said: "We feel that this will be a unique record of the life of Somerset Fire Brigade and as such it will contain names of as many people as possible that have been associated with the brigade or this publication."
Somerset's Chief Fire Officer Martin Burrell gave the project his full support and the authors feel that the finished product realy does reflect the enthusiasm with which photos, stories and precious memories were so generously shared.
"Our only regret", says Carolyn," is that whilst every effort was made to use as much of the material as possible it was inevitable that not all of the items could be utilised. All proceeds from the book, which is available priced £14.95, will go to the FSNBF. Further details are available on 01823 364510 or from Brigade HQ, Hestercombe House, Cheddon Fitzpaine, Taunton TA2 8LQ.

About The Authors

John P. Godley.
John joined the Fire Service in 1974 in Humberside, shortly after the Flixborough disaster and later moved to Somerset in 1984 on promotion as a Rider Station Officer at Taunton Fire Station. He now lives in Taunton with his wife Jan and two teenagers, Jonathan and Joanne and is based at Fire Brigade Headquarters at Hestercombe. The book has provided many contacts and even a suggestion of a follow up book - 'Not for a while yet!' is John's response.
John can now get back to the golf course as he hasn't seen it since January.
John hopes the book will rekindle memories of past and serving members of the brigade and serve as a lasting tribute to a very special breed of men and women.

Paul Sweetland
Paul began his Fire Service career in Somerset in 1974 and served most of his time at Bridgwater Fire Station. He became a Leading Firefighter before moving to Brigade HQ where he worked in the Staff Department and later as Temporary Sub Officer in the Operational Planning Section. He lives with wife Linda at Fivehead. He provided invaluable information on the more technical aspects of the book. His hobbies include running and motor cycling.

Carolyn E Hodge
After taking a course in Computer Aided Design (CAD) Carolyn joined the Brigade in 1991 as a CAD technician based in the Fire Safety Department at Hestercombe House. Carolyn's hobbies include gardening, pottery, fitness training and occasionally sky-diving! Her ambition is to try her hand at wing walking. Carolyn is married to Mike and they have three boys, Nick, Tim and Julian. The family lives in Huntsworth.

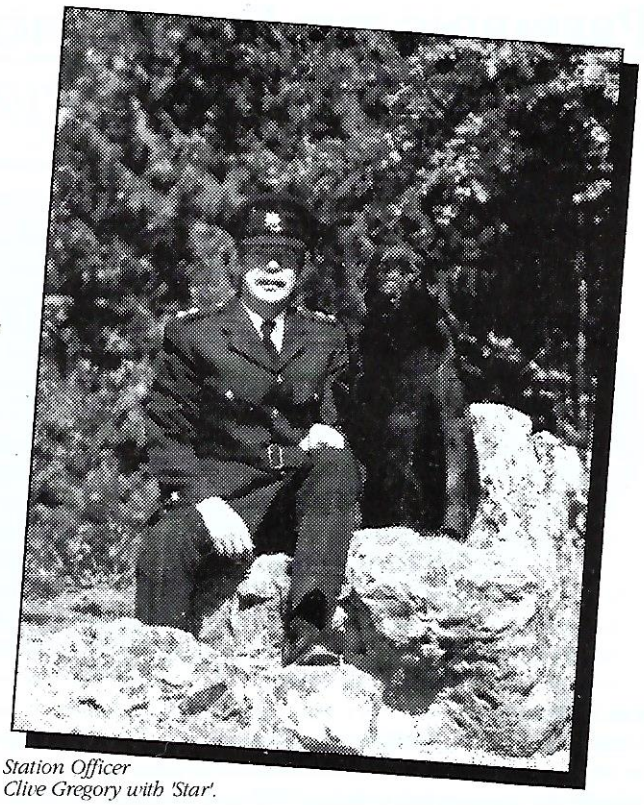
CERTIFICATION OF *ACCELERANT* DETECTOR DOGS

In October 1998 the Fire Service College, Moreton in Marsh, officially became the regulatory authority for the formal certification of United Kingdom Fire Investigation sniffer dogs. This represents a significant landmark, indeed a small piece of Fire Service history has been established as a direct result of the successful deployment of canines in the field of fire investigation. It has been recognised that a hitherto uncontrolled expansion of fire dogs within the UK should have a measure of accountability, especially in the litigious world in which Investigators operate. The Fire Service College, having a world wide reputation of expertise, will ensure that British arson detector dog and handler teams proceed on a regulated and qualified basis.

Fire Investigator Clive Gregory, a long standing member of the West Midlands Fire Service Fire Research and Investigation Department, has been appointed 'Examiner' with the responsibility of establishing standards of efficiency, testing and certificating accelerant search teams. Clive was the first Fire Officer in the UK to use a canine detector in the investigation of suspicious fires. His sniffer dog 'Star' was officially handed over to the West Midlands Fire Service by his sponsors Eagle Star in 1996. The results recorded by 'Star' so impressed the sponsors that financing for Tyne and Wear and Surrey Fire Brigades quickly followed. Eagle Star are currently negotiating with numerous other Fire Brigades and are supporting the certification process at the Fire Service College.

Thursday 22nd October became the first Certification Day at the College with all three 'Star' dogs attending. High winds and lashing rain failed to distract the search dogs from demonstrating a stunning degree of speed and accuracy enabling their handlers to receive their Home Office Fire Service College Certificates. Allister Stevenson and Julia Chandler of Eagle Star were on hand to witness the proceedings and re-confirm their Company's commitment to the arson dog initiative. It was a particularly satisfactory day for Alan Sims of Karenswood (International) Ltd. Alan Sims originated the principle of canine hydrocarbon detection over 30 years ago and has trained the three dogs and handlers to an exemplary standard.

The testing process was conducted in and around the purpose built fire buildings representing the 'real thing' but in a controlled envi ronment. Searching exercises and accuracy testing were scrutinised



Station Officer
Clive Gregory with 'Star'.

with the handler being required to 'call' the number of positive alerts made by the dog. At all times the dogs were required to be under the complete control of their handlers. After successful completion of these stages it was handlers' question time, subjects being operational procedure, welfare and canine psychology. Not until medical and training records were inspected and verified was the certification procedure complete and the awards made.

1996 saw the introduction of the first canine detector into the UK and in 1998 the whole process of fire investigation sniffer dogs came under the control of the Fire Service College. Two very important dates in fire investigation history. In these two short years fire dogs have operated in the West Midlands, Tyne and Wear, Surrey, Lancashire, Northumberland and even in far flung Cornwall! These dogs and handlers have been the pioneers often facing scepticism and apathy. Now the future appears extremely bright for the canine detector. Proven documented case history has been established. Evidence found by accelerant sniffer dogs has been before British Courts of Law. Fire investigation, where arson has been suspected, has been significantly speeded up. Evidence which would, under normal procedures, have gone undetected has been located by super sensitive sniffer dogs who have proven time and time again to be superior to any portable technological equipment presently available.

If the progress of the last two years continues we could, within a relatively short time, have sufficient dog and handler teams in strategic locations to be able to provide mutual assistance enabling the whole of the UK to have the benefit of arson dog detection. Eagle Star is one of the UK's largest household and commercial insurers and is keen to see an expansion of their sponsorship. Anyone wishing to gain further information about certification can contact Assistant Divisional Officer Flanagan at the Fire Service College. Station Officer Clive Gregory can be contacted at West Midlands Fire Service Headquarters on telephone number 0121 380 6731 or 0973 810280 and will be pleased to assist in any way.

Clive P Gregory
West Midlands Fire Service Headquarters

The three 'Stars' with their handlers Clive Gregory (left) from the West Midlands Bob Foster (centre) from Tyne & Wear and Pete Simmons (right) from Surrey

PREPARING THE FIRE SERVICE TO WORK IN AN AQUATIC ENVIRONMENT

DAVE JANES, RAF SHAWBURSY

As the calls for firefighters to work on and near inland and inshore waters increase employers need to meet their obligations under the Health and Safety at Work Act 1974. By means of risk assessment in accordance with the Management of Health and Safety at Work Regulations 1992 they must also identify any foreseeable hazard, assess the level of risk and identify measures necessary to prevent or adequately control the risk. Aquatic rescues often appear to be less dangerous than they are, but firefighters should remember that water can be as deadly as fire. A large variety of Emergency Service activities take place where personnel have work on, in or adjacent to water or other liquid in which they could drown. Each job will have a different set of circumstances that need to be taken into account when deciding what precautions need to be taken to prevent drowning. Accidental immersions where depth, temperature, current, visibility, obstruction and pollutants are unknown factors or are not understood dramatically increase the risk. When we are called to work in an aquatic environment it may involve more than the rescue of a drowning person. It may involve a child who has fallen through ice and suddenly submersed in icy water, where speedy action is necessary to prevent death. A motor vehicle involved in a RTA that has entered the water with trapped occupants, the rescue of a person with traumatic injuries following a boating accident, assisting victims of flooding to reach the safety of dry land, or a firefighter operating an LPP on the bank of a river. All these situations require risk assessment, personal protective equipment, technical equipment and training.

Risk Assessment

A Risk Assessment will help to determine what measures need to be taken to comply with relevant health and safety law and will identify the appropriate training, PPE and working practices, required as protective and preventative measures.

A Generic Risk Assessment for working near or in water should identify the hazards as drowning, the effects of immersion into cold water (divers syndrome) and the chemical and biological hazards from pollutants found in watercourses in the UK. It has been found from statistics that most aquatic incidents start within 3m of the waters edge. Therefore we can identify any person within 3m of the water's edge are at risk.

As we have already said each incident has a different set of circumstances so there is a need for a dynamic Risk Assessment for each and every aquatic incident. It is also important to remember that it is an ever-changing environment so the dynamic Risk Assessment must be an on going process. Each area is different and has a special set of needs, preplanning known sites of probable incidents at different water levels will help identify; - working practices, level of awareness training, and any specialist items of equipment needed to deal with incidents at these sites.

It is important to distinguish between working near or adjacent to the water as part of normal fire service operations that could be overlooked and, personnel entering or working adjacent to the water as part of a river/water rescue. To explain this we will look at two different situations that will identify the different needs.

Case 1

During a fire at Doggy Dan's motor repairs the Old Canal Works Industrial Estate on the 23rd November a LPP (light portable pump) is set to work with a pump operator from the canal to provide water to the fire ground.

Hazard

- Drowning
- Diver's syndrome from sudden immersion in cold water
- Chemical and biological hazard from possible contaminated water
- Injury to neck from fire helmet (rim of helmet will offer resistance when entering the water)

Risk

Pump operator

Crew setting LPP into canal.

It is possible to quantify the Risk Assessment using a simple formula where:-

Risk = Probability Estimate x Severity Estimate

Probable Likelihood	Severity
1=Improbable Occurence	1 = Trivial Injury
2 = Possible Occurrence	2 = Minor Injuries
3 = Occasional Occurrence	3 = Major Injury Individual
4 = Frequent Occurrence	4 = Major Injury to Several
5 = Regular Occurrence	5 = Death of one Person
6 = Common Occurrence	6 = Multiple Deaths

1 - 3	Minimal - Keeping under review
4 - 6	Low
8 - 10	Medium - improve control measure
12 - 36	High - consider stopping task until control measures have been developed

Assessment

From the tables it would be fair to say the possible likelihood is 2 = Possible Occurrence of any one of them falling in, and the severity at its worst would be 5 = death of one person. This gives a score of 10 - (Medium - improve control measure)

Control

We can improve control measures by: -

- Basic awareness level training for personnel
- Providing everyone at risk with a suitable buoyancy aid
- Avoid single person work (there is always someone to raise the alarm)
- Have a means to rescue a person in the water e.g. throw line
- Remove fire helmet in this situation

As it would not be practical to dress the personnel in chemical protection suits we can't practically eliminate the effects of pollution but we could reduce the risk with decontamination.

Re assessment

If we now recalculate having put in to place the control measures above the possible likelihood remains the same 2 = Possible Occurrence. Although through basic awareness training the personnel should be more aware of the potential dangers. The severity at it's worst would now be 3 = Major Injury Individual as there is still the hazard from contamination. This now calculates out to 6 = Low. This is much more acceptable.

AN AQUATIC ENVIRONMENT - CONTINUED

Case 2

A rescue boat from Wetback fire station is called to rescue a canoeist from a man-made weir. A crew of 4, (with 1 member trained as a RYA rescue-boat operator). All are equipped in dry suits BS 395 buoyancy aids with suitable helmets for a water environment, they plan to use a RIB to reach the victim from the hydraulic jump (stopper wave) at the base of the weir.

Hazard

The Rib will be drawn by the tow back into the hydraulic jump. The boat would capsize in a short time placing the crew in the same predicament as the canoeist but with a large surface load (the boat) in the hydraulic with them. This could lead to major injury particularly impact with the boat. Some BS 395 Buoyancy aids will not allow personnel to swim effectively preventing them from swimming to the ends of the hydraulic jump and they would drown.

Risk

Boat Crew

Assessment

As the crew are regularly called to river rescues although not all like this one the probable likelihood could be 5 (regular Occurrence). The severity could be 6 (multiple deaths)
5 x 6 = 30
(High - consider stopping task until control measures have been developed)

Controls

1 Suitable buoyancy aids for the environment
2 Relevant Swift water training for the crew
3 Provision of suitable rescue equipment to avoid personnel having to take to the water (Reach, throw, wade, row, go)

Re assessment

As the crew call on their training they would opt for a shore based rescue protecting their personnel with safety lines. The Rib would be used as a safety platform down stream of the incident. The probable likelihood of anyone entering the water would become, 1 = Improbable Occurrence. The severity could be 2 = minor injuries from rope burn etc.
1 x 2 = 2 (Minimal - Keeping under review)

Conclusion

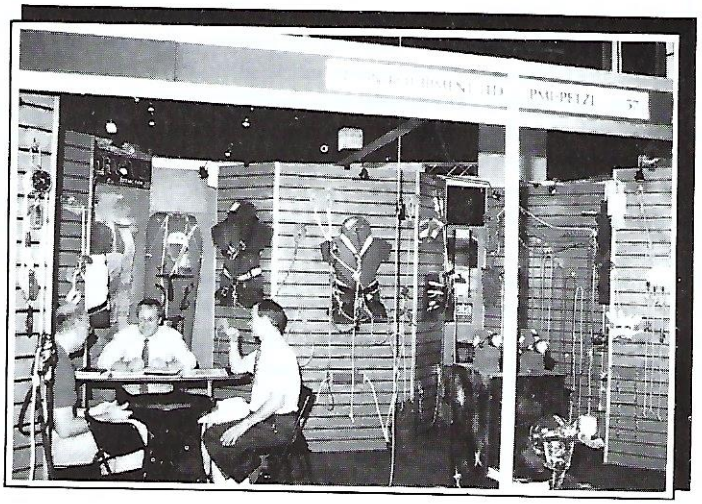
As you can see by using a risk assessment in the preplanning of an aquatic incident, you can reduce the risks in an already dangerous job with simple training and suitable equipment.

Personal Protective Equipment

Where there is a foreseeable risk of falling into the water that can not be controlled by other means, or the unavoidable need to enter the water, it is essential for the employer to provide sufficient personal buoyancy equipment, to be worn by the employee to keep them safely afloat. Directive 89/656/EEC details responsibilities about selecting, using and maintaining personal buoyancy equipment. This is implemented in the UK by HSE's Personal Protective Equipment at Work Regulations 1992

Selecting personal buoyancy equipment

To select the correct personal buoyancy equipment for use in a rescue environment, a number of factors should be considered. These will vary from area to area. No one type of personal buoyancy can be considered to be correct for every area and applications.
Factors to be considered in selecting the correct personal buoyancy equipment include frequency of use, the range of sizes and weights of wearers, range of swimming abilities foreseeable types of water conditions that the equipment is intended to be used in. This is an area were specialist advice should be sought from a river rescue professional.
Combined British and European Standards (BS ENs) exist for Personal buoyancy equipment. Selection should be made from equipment produced to this standard. In addition to this, the personal buoyancy should offer additional features for use in a rescue environment.
A number of types and styles of Personal buoyancy are produced, the vest style personal buoyancy being the most suitable for use in a river rescue role. It offers thermal insulation from the cold water reducing the risk of hypothermia, prolonging survival time and increasing the time a rescuer can stay in the water effecting a rescue. A buoyancy vest also offers the rescuer body protection where there is a risk of collision with objects in the water. A quick release harness is an addition to the personal buoyancy that provides the opportunity to fix a line giving support to the rescuer in and around moving water. It must be of a design that allows the wearer to quickly release the tether in an emergency.
The provision to carry a sharp knife must be a major safety consideration, as the risk of entanglement when using lines in an aquatic environment is high. Pockets on the outside of the personal buoyancy are always useful for carrying equipment leaving hands free especially when in the water.
In open water the personal buoyancy equipment needs to offer a greater amount of buoyancy, the extra buoyancy offers a greater level of security for the rescuer, as the shore could be a distance away with a delay in the response time for assistance. Inland moving or swift-water rescues present their own special needs in personal buoyancy. The amount of inherent buoyancy required may need to be reconsidered in certain circumstances.



AN AQUATIC ENVIRONMENT - CONTINUED

Helmets

Fire helmets with fixed brims should not be used; these can cause serious spinal injury in an aquatic environment. Helmets should be chosen from the large number of different styles available meeting the requirements of the EEC directive covering helmets for use in an aquatic environment. A lightweight ventilated helmet with foam padding or suspension systems is the preferred type. It should protect the top of the head also the temples and back of the head. The fit of a helmet is important so a one-size fits all helmet may be the preferred choice unless they are to be personal issue. The helmet should be brightly coloured, white and black should be avoided, as these are harder to see when in the water. Helmets fitted with reflective strips will help locate personnel during night rescues.

Aquatic Protective Clothing

EEC standards are currently being forged for Aquatic Protective Clothing but they are not yet available. As a rule of thumb if you add the water temperature to the temperature of the air and it is below 38°c Aquatic Protective Clothing should be worn. Aquatic Protective Clothing falls into two main types dry suit and wet suits. Both have been developed for sub aqua divers. Wet suits are made from neoprene and come in a variety of thicknesses and coverings. They work by letting a small amount of water between the skin and the neoprene, the body warms this thin layer of water, which then acts just like any other insulating layer. If the wet suit is a good fit this layer will be held against the skin even when the wearer is in the water. The wet suit also offers body protection. As the fitting of the wet suit is critical it may need to be personal issue. Dry suits provide the best thermal insulation when used with thermal undergarments. They give ease of movement and fit different sized people. They will also provide protection from the wind when the wearer is out of the water reducing the wind chill factor for rescuers who have been in the water. In addition they provide protection for the wearer from hazardous material when working in contaminated water.

Foot wear

The type of footwear chosen is always a trade-off between protection and warmth. Fire boots have no place next to water. Walking boot with neoprene socks is a good combination. All-terrain neoprene booties with thick moulded soles are an excellent choice. Some dry suits have built-in boots that work well, but restrict the wearers by shoe size.

Hoods and Gloves

In extreme conditions hoods and gloves may need to be considered. Hoods of either neoprene or pile that insulate when wet can be indispensable in very cold conditions, reducing the heat loss from the body by up to 25%. Gloves made of a combination of neoprene and leather provide the best combination giving thermel protection and maintaining manual dexterity. Although ali leather gloves do work.

Technical Equipment

Throw lines

The throw line is the primary tool in any river rescue. A nylon bag with a chunk of flotation foam, with either Polypropylene or HMPE line stuffed rather than coiled. Line length will vary and can be found between 8 to 25m either 6mm 8mm or 10mm.

Line diameter	Polypropylene		HMPE (spectra/dyneema)	
	Av. brake	Weight per100m/KG	Av. brake	Weigh per100m/
6 mm	400	2.0	1206	2.5
8 mm	610	3.0	2545	4.41
10 mm	1131	5.1	3520	6.29

Aquatic Rescue lines

These lines are used where large loading may be applied i.e tyrolean, and are found in common lengths of 50m, 75m an 100m. The lines used most commonly by swiftwater rescue team (SRTeams) are polyester abseil ropes, although SRTeams are star ing to use HMPE line developed for sailboat racing and canyonin

Abseil rope	11mm Ø 2800 GTD	? Kg per	100m	Sinking
HMPE line	10mm Ø 3500 GTD	6.3 Kg per	100m	Floating
HMPE line	12mm Ø 4800 GTD	9.8 Kg per	100m	Floating

Carabiners

Carabiners have been in the past associated with rock climbi and mountaineering, but now have found their place in the mo ern fire service, with rope or line rescue teams. Carabiners are truly multi-purpose water rescue tool. There are many differe types, shapes and sizes available on the market today; speciali advice needs to be sought to determine the best type for differe applications.

Other Items of Technical Equipment

Other items of technical equipment for use in an aquatic en ronment such as: - pulleys, figure 8's, ascenders, harnesses, we bing tapes, rescue boards, and rescue boats all have their place river rescues, but are not all going to be needed. The foreseeab type of incident that a team could be called to deal with, and t findings of the Risk Assessment will determine the value and su ability of a piece of equipment for a team.

Training

Swiftmoving or Whitewater Safety and Rescue Training has dev oped rapidly since the 1980's. In the UK techniques have be developed to meet the needs of the British Canoe Union to ful its obligation under Health and Safety for its instructors. In t USA techniques developed along different lines, that of the re cue professional. The Swift Water Rescue programme was dev oped by Rescue 3 International to meet the needs of Fire Servi Police and Wilderness rescue teams throughout the USA. The tier system provides training at all levels for rescuers in the aqu ic environment and is accepted as the 'recognised' standa (Internationally) for personnel working professionally on the ri in any capacity. In the UK Rescue 3 Swift Water Rescue Train is co-ordinated by The National Whitewater Centre in Bala. T training has already been taken up by a number of British F Services, with some brigades having taken the initial steps by h ing had personnel trained up to instructor level.

Training courses are designed to provide individuals and agenc with information to help with Risk Assessment and Pre-plan and the basic information on techniques and equipment responding to river and flood rescues. Topics covered includ underwater dynamics, the handling of hazards and obstacles the water, using basic rescue equipment in an aquatic envir ment, setting up technical rope systems, controlling in-water c tact rescues, management of river rescues. Time is also given discuss the utilisation of rescue teams, dogs, probe poles and sc and surface divers in river searches.

MAJOR LEAK AND GAS CLOUD
AT INDUSTRIAL PREMISES

INTRODUCTION

Dennis Davis Chief Fire Officer of Cheshire reports on a recent chemical incident which highlights the effectiveness of a strategic approach when dealing with such events.

Cheshire has a history of chemical production dating back to the early part of this century.

Today Cheshire has some of the most advanced petrochemical plant in Western Europe. The national average of chemical to commercial and industrial business is 10% to 90%. In Cheshire its 50%-50%. In addition the industry employs 25000 people and in Cheshire has a GDP of £1.26 billion per annum.

These factors are important in describing the relationship Cheshire Fire Brigade has with the chemical industry and the ongoing development of relationships, plans and hardware to deal with incidents which involve the industry.

A recent incident highlighted the potential in terms of off site effects. In addition it is interesting to note that this incident did not involve a CIMAH site, although as the article explains off site effects were clearly visible some considerable distance away.

An 20 October at 0959 hours Cheshire Fire Brigade's Command and Control Centre received a call to Brunner Mond; a large chemical processing plant near to the town of Northwich.

The initial call stated that a quantity of acid was on the roadway within the plant. Two water ladders were sent from the day manning stations of Northwich and Winsford and a hazardous materials unit accompanied by a water ladder from Chester.

INITIAL ACTIONS

On arrival at the scene crews reported a foggy mist which obliterated the plant. The foggy mist or cloud was being generated by a large vertical tank, which contained hydrochloric acid, which was leaking from a discharge pipe at the base, at an estimated rate of one tonne per minute. As soon as the acid hit the concrete floor within the bunded area it immediately gassed off. The Officer in Charge reported that the wind was blowing from the South towards the North. However, the highly visible cloud which extended some considerable distance from the source contained high levels of water vapour nucleated by a small amount of HCL, thus the further the cloud moved the hazard became less.

The wind direction, fortunately, was blowing away from the main town of Northwich. The Brunner Mond site is on the North of the town and the gas cloud was blowing towards Anderton, the famous site of the Anderton lift, a lightly populated area. Initially two Firefighters donned Chemical Protection Suits (CPS) and breathing apparatus and got a ground monitor operating as a spray curtain to dissipate the cloud.

Brigade Control sought hazard information off Chemdata which was transmitted to the incident ground. Works personnel confirmed that the acid concentration was 36% HCL. Technical information confirmed that the acid was highly corrosive and any gas cloud could cause a severe respiratory hazard close to the source.

HCL gas is soluble in water and the strategy of using spray and fog to dissipate the gas cloud whilst also warning residents down wind of the potential hazard, was put into effect.

CONSULTATION WITH THE COMPANY

Following consultation with works personnel it was evident that the flow of acid from the 200 tonne tank could not be immediately stopped and that pumps within the bunded area would be used to transfer the leaking acid to neutralising tanks.

The cloud being generated by the acid effectively split the incident ground in two making command and control more difficult. As further resources arrived crews were committed in CPS.

COMMUNICATION

In the early stages in the Control Room it was realised that the cloud was going to give cause for concern and that it was vital to get information to the public via local radio. The Brigade has for some years been at the forefront of developing and communicating what is termed a shelter policy ie encouraging people to stay indoors with windows and doors closed with their TV and radio switched on so listening for further information. A major part of this has been the production of a video which is used in the Key Stage II of the Brigades schools education programme and a booklet which backs up the message. This being the case there is perhaps a greater understanding amongst the community of Cheshire as to the rationale of shelter.

Throughout the period of this incident considerable effort was made by the Brigade to communicate this message. The response from local radio in putting out factual information was excellent. A considerable amount of work has been undertaken in the development of mediums mainly sponsored by the chemical industry and the building of relationships and creating a greater understanding and lines of communication. The overall ethos being: that the industry is vital to the Cheshire community and its well being - that occasionally when things do go wrong plans, procedures and the emergency services are well practised to deal with that incident professionally. The net result should be a community more at ease with the industry and less post incident anxiety.

CONTINUED →

MAJOR LEAK AND GAS CLOUD
AT INDUSTRIAL PREMISES - CONTINUED

CLOSE LIAISON

At this stage communication between the emergency services on site had ensured the closing of roads between the site and Anderton and joint Command and Control Centres were set up to ensure close liaison and decision making. Additional weather information was requested from CHEMET, the Meteorological Office emergency services information systems and a request was made for the Police Air Support Unit to be utilised in usually plotting the cloud off site. By 1100 hours 4 BA wearers in CPS suits were in control of 4 ground monitors; whilst company pumps were working to remove acid from the bunded area.

The rate of the leak had not reduced and following further discussion with site personnel it was estimated that the incident would be likely to go on for a further two hoursl a message to this effect being sent at 11.21 hours which also requested "two further appliances making pumps 10".

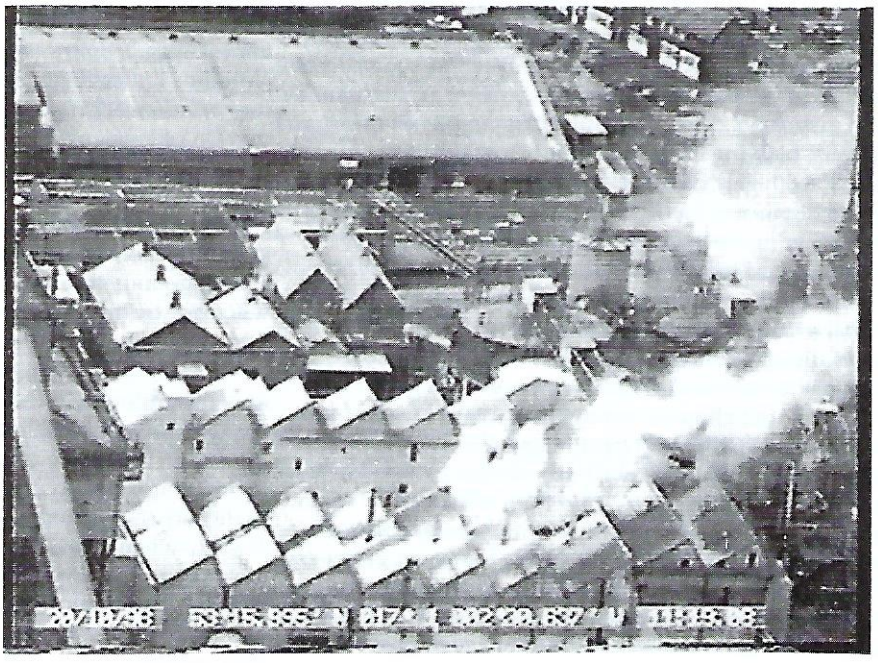
PLANS

As has been mentioned earlier this premises was not designated under the Control of Industrial Major Accident Hazards (CIMAH). The Cheshire Brigade have for designated premises, and had before the legislation, a procedure called Cloudburst, which was originally developed with ICI over twenty years ago. 'Cloudburst' is where there is the potential for off site effects. Whilst as.has been stated Brunner Mond is not a CIMAH site, the Brigade' s response of this incident mirrored the 'Cloudburst' procedure. This resulted in the Chief Fire Officer requesting that the local District Off

Site Emergency Centre (DOSEC) for the Vale Royal District Council to be brought into use. The Council did set up the DOSEC which worked effectively throughout the remainder of the incident and played a key role in communicating with Schools, and other support agencies essential to the operations.

VISIBLE CLOUD

Whilst the mist or cloud had reduced a large cloud was visible from the site moving off site for some considerable distance. - Five fog majors pumping 2000 litres per minute each were in use. At 1246 hours it had been confirmed by the Police Air Support Unit that the cloud was clearly visible at 1200 feet and was some 3 miles long stretching over the Anderton district. Following communication with the DOSEC it was confirmed that Schools downwind in this area had been requested to stay indoors and that Parents were being advised not to collect children from Schools. Throughout this period constant advice was being sought from the Meteorological Office using the Chemet system.



At 13 57 hours the Chief Fire Officer advised that the leak had ceased. Brunner Mond personnel placed a wooden bung between pipes to prevent any further leak whilst Firefighters stood by with spray jets. It was observed that severe corrosion to the discharge pipework had taken place with several centimetres disintegrating. There was also considerable damage caused to the concrete in the bunded area. The stop message was finally sent at 1712 hours. Site and Brigade personnel confirmed that there was no further potential for a leak from the source.

CONCLUSION

Historically Cheshire is well versed at dealing with incidents with the potential for off site effects. This incident did not involve a designated site as it contained insuff1cient inventory and therefore does not require an off site emergency plan. However7 the Brigade's own operating procedures for such incidents and the combined experience of the other emergency services and the local authority enabled a safe and expedient operation to be undertaken.

The previous effort made with public information and educational initiatives to promote shelter helped to reduce public anxiety and assisted with the dissemination of information during the incident.

Media attention at the time was intense. It is interesting to note that the usual anxiety expressed by the public, post incident, has not been manifest in a similar way as it has following such incidents in the past. This, it is believed, results from closer working between the Chemical Industry, the Health and Safety Executive, the Environment Agency, Local Authorities and the Emergency Services combined with the fact that there was no harm resulting from the incident.

A number of operational lessons from this incident have also gone forward to Cheshire's Senior Emergency Liaison Committee (SELC).

HANOVER BOMB SCARE

BY KLAUS BETHGE

Memories of howling sirens, the horrifying sounds of falling bombs and destructive explosions were all dragged back into the hearts of the older Hanover community in Christmas week when three undetonated bombs from World War 2 were found in a suburb with a population of 3000.

There was panic in Hanover as the fire brigade and other emergency services had to perform a vital bomb-defusing operation, one of the biggest since the war.

The bombs were found near a large general hospital, a dermatology centre and an old persons home.All three buildings had to be evacuated to ensure that a large number of casualties did not occur if any of the bombs went off.

The three bombs, each weighing 1000kg, were dropped by the R.A.F in 1944 and had been buried underneath the rubble that was once buildings. Over the years the bombs had sank into the ground without detonating, but they were still live.

The bombs were detected by the Bomb Disposal Service, who are still searching for undetonated bombs 50 years after the end of the war. An end to the search does not seem near and there is always a risk that a bomb may go off anywhere in the country.

Fortunately for Hanover, all of the roads and buildings that were destroyed in the war are very similar to those that have been built to replace them, so it is not difficult to find the most likely places for the bombs to be.

An example of how dangerous these weapons of a dark time are was shown recently when an undetected bomb self-detonated, totally wiping out a nearby garden centre. It was very fortunate that the bomb went off at night and there were no casualties. Similar events have occurred on 50 separate occasions since the war, and in most of the incidents there were casualties and deaths.

On this occasion the bombs had been supported by impact detonators and were not the kind that exploded when the acid inside is sparked. This was very fortunate as acid bombs cannot be defused and the only possible solution is to blow them up. This almost always causes damage and sometimes injuries, especially as the bomb must first be transported to a sparsley populated area. This means carrying a bomb through the city is a worrying scenario.

The first two bombs were ironically found in an area where a famous annual rifle contest takes place,the third only 50 metres away from the emergency wing of the hospital. The latter bomb, if detonated would have caused many injuries and deaths.

The bombs were situated close to the dermatology clinic, the elderly persons home and the nursery. The repercussions of a bomb explosion would have be immense. In addition, the main road leading in and out of the city passed through that area.

Early in the morning on the fourth day of Christmas the rescue services and fire brigade began to evacuate the hospital. Other services, such as the Red Cross and the " Quick Response Services" aided the emergency services.

At 6:00am the evacuation began with the transfer of intensive care patients followed by the 185 other patients. It took almost four hours less than expected to evacuate the whole hospital. A new computer system was used which gave instructions on how to evacuate the hospital in the best possible way. The programme was created after a fire in the University of Hanover's Department of Medicine three years earlier.

The reserve and voluntary emergency forces performed the evacuation led by the Emergency Doctor. Churches and the Medical University acted as hospital wards after the real hospital was evacuated. They were detailed to deal with any emergencies. The community also pulled together in the crisis to help in any way they could.

The complicated procedure of evacuating families from their homes was easier than expected. The citizens co-operated with the emergency services very well. In fact, the evacuation procedure was a complete success and the bombs were, thankfully, successfully defused. When one of the bomb defusion experts was asked whether he was afraid at the time he replied that he was not afraid but was aware of how dangerous the situation was. In the event the whole traumatic incident ended without any accidents but this only emphasises just how important it is that citizens can efficiently co-operate with the emergency services. It is also an example of true bravery in such danger.

STOP PRESS

On December 30, 1998 a report reached us of a World War 2 bomb which seif detonated under a bus.

The blast in the town of Goettingen, 80 kilometres from Hanover, caused one serious injury.

Early indications were that the bomb had sunk into boggy ground over which a road was subsequently built. This turned out to be a blessing in disguise as the depth of the bomb caused a reduction in the size of the subsequent explosion.

This was the second self-detonation in Goettingen within the last two years.

additional reporting by Paul Abbot

100 years for gang bosses

Five of Tyneside's most feared and dangerous gangsters have received sentences totalling more than 100 years following the successful courtroom culmination of Northumbria Police's "Operation Domino".

Domino, set up in September 1996, was a deliberately targeted attempt to undo two major gangland figures, Paul Ashton and Robert Webber, who had been involved in brutal and persistent crime since the mid-seventies.

37 year old Ashton from Gateshead had previous convictions stretching back to 1972 while his partner in crime Robert George Webber, 38, of Sadberge, County Durham, formerly of Gateshead, was first convicted in 1975. As the duo's brutality and various criminal activities increased so too did their reputation. Ashton and Webber eventually spread a web of fear and intimidation across the North East.

CONSPIRACY

Numerous occurrences of gangland violence, brutal assaults, drug dealing, witness intimidation, large scale benefit fraud, robbery and occasions involving firearms were reported. Northumbria Police decided to set up Operation Domino in a bid to bring the gangsters to book. Domino concentrated, in the main, on one major illegal action, namely a conspiracy to murder.

The intended victim was a former friend with whom they had fallen out in the early 1990s. The underlying reason for their actions is unknown but it was undeniable that the two wanted their former friend dead.

BRUTAL

In an attempt to ensure that the enterprise could be concluded successfully they recruited Paul Stephen Lyons. Lyons, in his 30s and from Teesside, was to play a major role in their attempts to kill their former associate.

Numerous attempts to kill or injure the unnamed victim were carried out, the most notable a brutal attempted murder carried out with a bayonet in July 1995. The victim was savagely stabbed and left for dead having received multiple stab wounds to his shoulder, arm, knee, thigh, ear, face, jawbone and chin leaving him scarred and with nerve damage. He had just returned from taking his young son to school when he was attacked from behind by Lyons while Ashton and Webber looked on.

SHOOT OUT

The final incident, which was to prove Ashton and Webber's downfall, took place in January 1996. A gun battle took place after Jaguar driving Webber and his passenger Ashton ambushed their victim and his friends at a house in Gateshead. Ashton fired shots from a .45 self loading pistol at the men who returned fire. Webber and Ashton fled the scene at high speed.

Despite both gangs taking shots at each other in a residential area in broad daylight none of the men were killed. The intended victim and his four friends received lengthy custodial sentences for possession of firearms and an intent to endanger life. Detectives who arrived at the scene of the battle recovered a Colt.45 pistol, a German 7.65mm pistol, two .38 calibre revolvers and a sawn off shotgun.

Further weapons were recovered during the subsequent enquiry including a MAB 7.65mm pistol, a .38 calibre Enfield revolver, and a 9mm UZI sub machine gun with over 200 rounds of ammunition. Then in April 1997 police divers recovered a .45 calibre Argentinian pistol from the river Tyne which matched the cartridge cases found at the scene of the ambush in January 1996- the weapon used by Ashton.

CRIME AND PUNISHMENT

After painstaking detective work involving the taking of almost 1600 statements Ashton and Webber were convicted in April 1998 on charges of conspiracy to murder and possession of firearms after a four week trial. Their associate,Lyons, was also convicted of conspiring to murder.

Ashton received a sentence totalling 31 years having been found guilty on both counts. He already had an eight year sentence pending for conspiring to supply drugs. Webber was sentenced to a 29 year prison term. Lyons received 14 years imprisonment which was consecutive to a term of 5 and a half years he was already serving.

The Domino team also recovered £22300 worth of drugs in a November 1996 swoop which resulted in three men, one of whom was Ashton's brother-in-law being convicted in October 1997 of conspiracy to supply drugs. They were sentenced to prison terms totalling 22 and a half years.

Another man received 18 months imprisonment for possession of a firearm in January 1998.

Reporting restrictions imposed at the Crown Court during an earlier trial prevented publicity about the cases until now.

OPERATION DOMINO AT A GLANCE

. Investigation spans more than two years.

. 25 detectives on the enquiry team.

. Two key targets

. Ten offenders in total

. Charges brought include conspiracy to murder and possessing firearms.

. High powered firearms and ammunition siege.

. £22300 worth of drugs recovered.

. Jail sentences totalling 111 years.

. 1600 statements taken.

PAUL ABBOTT

HANOVER AIRPORT

Moving In The Right Direction

The new Terminal C at Hanover Airport is the subject of a groundbreaking and comprehensive total fire protection concept which lays down strict criteria on all building materials used in the construction and fitting out of the new building.

The all-round safety concept is, in part a response to the tragic events which unfolded in Frankfurt two years ago. The devastation caused by a rapidly spreading fire was blamed to some degree on poor fire resistance in materials used in its construction. These not only burned rapidly but gave off deadly toxic fumes.

With a few unavoidable exceptions only materials which are classified as A (non flammable) or B7 (flame resistant) to DIN 4201-1 have been passed for use in the new Hanover terminal. This stricture even includes the airport's signpost systems which are, as a result, built from aluminium and Hostaglas.

A plastic, polethylenetetraphthalate (PET) Hostaglas is the same material as that used in lightweight drink bottles. Most unusually for plastic it belongs to fire category B1 (1Y to BS 476.7) and is classified as not producing burning drips.

In the event of fire at the new Terminal the robust, impact resistant signs will show very little smoke development and just as importantly the gases that are produced will be non toxic with no halogens, caustic or corrosive substances released.

Other safety considerations mean that all the materials used in the new Hanover signs (which hang above visitor's heads) are lightweight, fracture resistant and in the event of breakage produce no dangerous splinters. The yellow colouring on the direction signs is achieved by screen printing.

The new direction signs are currently replacing older signage in Terminals A and B.

Fire Safety taken seriously at Hanover Airport. The Signs Are Good.

New Aviation Training Agreement Between FSC and SERCO

As of November 1, 1998 the delivery of UK CAA mandatory training at the Fire Service College, Moreton - in - Marsh has been suspended.

News of the innovative new agreement came in a joint statement issued by the FSC and SERCO International Fire Training Centre in October. Thew agreement means that SERCO will continue with the provision of CAA mandatory training at its Teesside Airport site while the FSC will in future accredit the appropriate courses to the International Fire Services Accreditation Congress (IFSAC) standard, and in this respect will continue to monitor the quality of training. The FSC is retaining its close links with the aviation industry and will continue to take bookings for the whole range of aviation training including special aviation incident training for the UK Fire Service and international aviation consultancy services.

NEWCASTLE AIRPORT OPEN DAY

Trevor West, Newcastle Airport's Managing director (left) is pictured handing over a cheque for £1,061 to the Chair of The Trust Fund for Disabled Children, Larry Miller following the Airport Fire Service's highly successful Open Day.

SPACE
The Final Rescue Frontier

A new, two - day course combining confined space entry with search and rescue techniques has been launched by Draegar.

The Emergency Procedures in Confined Space Course' is held at Draeger's purpose built training centre in Blyth, Northumberland and offers participants a chance to undertake exercises in the company's sewer and gallery complex using full weight and CPR dummies complete with stretchers, spinal boards, splints and other rescue equipment.

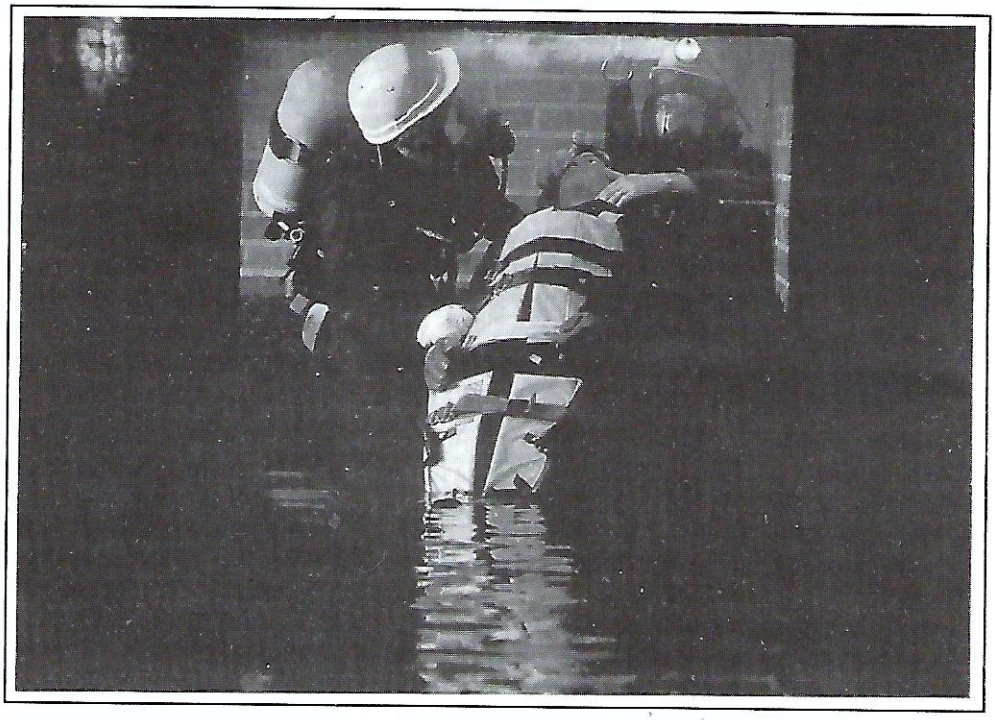
The course covers current legislation as well as specified risks and hazards. Other topics discussed include: the need for appropriate Personal Protective Equipment (PPE), the use of gas detection equipment, harnesses, winches and ropes.

Casualty examination, assessment and treatment are all discussed as is the recognition of the different levels and causes of unconsciousness and medical conditions, including asphyxiation.

In addition to recovery positions and correct examination and immobilisation procedures, the course looks at the theory and practicalities of injuries to bones and supporting tissues as well as the control of internal and external bleeding and head and facial injuries.

Successful participants are issued with an Emergency Procedures in Confined Space Training Course certificate.

Details of the course are available from Richard Beckwith on 01670 352891



Little room for manoeuvre

FB - 1 FIREFIGHTERS MASK
JUST WHAT THE ADO ORDERED

Ted Simpson, an ADO at St. Austell Fire Station in Cornwall has seen his advice and expertise made concrete in a new Firefighter's Mask.

Ted worked closely with facemask suppliers Respro UK during two years of research into the FB - 1 mask. Their collaboration has resulted in a facemask which will protect firefighters from dust contamination in circumstances where breathing apparatus is not appropriate. Exposure to such particulate contaminants can, of course, result in dust retention and subsequent lung damage.

Cornwall County Fire Brigade initially briefed Respro in January 1996 and the firm worked strictly to its guidelines in order to meet the Brigade's specification and criteria for use. ADO Simpson who was instrumental in this process said the resulting product is just what the doctor ordered, "We have a product which is functional, easy and quick to fit and remove, easily maintained, comfortable and fulfils all of our needs in terms of protection against particulate inhalation."

The mask is designed for work in places without free flow of air, such as loft spaces; during cutting away operations that do not involve known noxious materials; working away from the scene of operations when there is no danger of smoke fumes or suspended vapours. Details on 0171 721 7300

INTERACTIVE

CRISIS TRAINING

A £1m global satellite project partly funded by the European Space Agency (Arte 3) is helping develop a ground-breaking real time multimedia healthcare training and education service for healthcare professionals. The MultiMED project is the first service of its kind in the UK and probably the world.

Very small aperture satellite terminal (VSAT) link ups from the Milton Keynes based HOT Telecommunication Ltd., will allow healthcare professionals in training to experience crisis managment first hand through interactive, real time communications with a national network of 10 centres throughout the UK and ultimately worldwide.

The exercises involve a computer controlled Human Patient Simulator (HPS) such as 'Stan the Man' at the Bristol Medical Simulation Centre. 'Stan' reacts to various types of human medical emergencies allowing doctors and nurses to experience 'live medical emergencies without leaving their personal computer.

Mike Cook managing director of HOT (formerly Hughes Olivetti Telecom) believes the system has an important role to play. He said: "Reducing cost and increasing reach has always been an important issue among healthcare professionals and VSAT allows them to do both."

NEW NATIONAL IDENTIFICATION FOR EMERGENCY AMBULANCES

The Royal Berkshire Ambulance NHS Trust is the latest to adopt the new style visibility presentation of its Paramedic Emergency Ambulances. The updated style of markings is representative of a new National Standard to be accepted by the Ambulance Service Association on behalf of all NHS Ambulance Services.

The style is based on a large, reflective green and yellow battenburg design and represents a landmark in the history of the NHS Ambulance Service; from this time all new NHS Paramedic Ambulance across the country will be marked in exactly the same way. Until now, Ambulance Trusts have used varying markings for emergency vehicles.

The move comes following a research programme commissioned by the Home Office in 1996 to assess emergency vehicle conspicuity markings and to create a scheme that would not only offer a higher level of conspicuity across varying conditions, but one that would provide a unique and instantly recognisable identity for emergency vehicles nationwide. The Police Scientific Development Branch created the battenburg design and earlier this year the Association of Chief Police Officers invited their colleagues from the Ambulance Services Association and Chief Fire Officers Association to discuss the proposals and also offered the opportunity to agree a common standard of conspicuity markings that could be enshrined in law for use by all of the emergency services.

The first Ambulance to bear this new highly visible marking has commenced duty predominantly in the West of Berkshire. Speaking of the new design, Mr. Keith Nuttall, Chief Executive of the Royal Berkshire Ambulance Service said, "This is a great step forward in standardising NHS Emergency Ambulance Services nationally, and will provide greater safety for the patients and for the paramedics who provide the service in an often hazardous environment".

LINCS TACKLES AGE OLD PROBLEM

The Chair of Lincolnshire County Council's Public Protection Sub Committee, Mrs Jean Johnson has given her backing to the service's ongoing attempts to tackle fire deaths among the elderly.

The brigade recently received a donation of 300 smoke alarms from Dicon Safety Products and store giants B & Q as part of its Fire Safety Week campaign. These are now being fitted in the homes of vulnerable residents.

Councillor Johnson said: "We are extremely concerned about the growing number of elderely people who are dying in house fires - during the last 16 months of the eight fire deaths in Lincolnshire six have been persons over 70 years of age."

UL's Well That Ends Well

The BRE Fire Research Station has signed an agreement with underwriters Laboratories Inc (UL), one of North America's leading conformity assessment services which will enable it to participate in the company's Third Party Test Data Exchange Program.

Under the agreement, signed on November 19, BRE may submit test data to UL for evaluation of products' eligibility to bear the UL Mark.

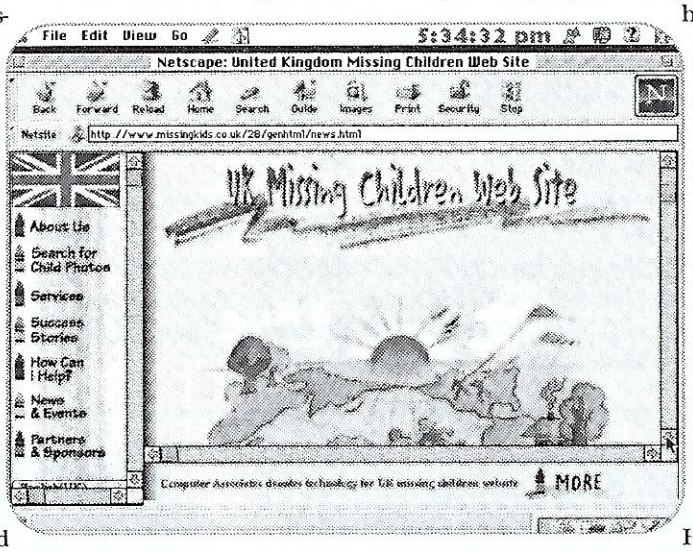
In particular, the agreement pertains to the standard UL910 Test for Cable Flame Propagation and Smoke Density Values for Electrical and Optical Fibre Cables Used in Spaces Transporting Environmental Air.

BRE recently purchased a Steiner Tunnel in order to meet testing criteria. Staff are currently undergoing training in its use.

The agreement will also cover other UL standards including UL 1666 and UL 1685.

POLICE WEBSITE LAUNCHED TO TRACE MISSING CHILDREN

HERTFORDSHIRE CONSTABULARY and the Metropolitan Police Service went on-line on Friday, December 18 1998 in a world wide bid to find missing children. The website, www.missingkids.co.uk, is the first designated internet site in the UK for missing children. Similar sites already exist in Brazil **www.missingkids.com.br.** and the USA **www.missingkids.com**



During the six month trial period, police officers tasked with searching for missing children can add the internet to their list of investigative techniques by using the site. The page displays pictures of missing children with their details and who to contact should they be seen. Other features include the ability to print off display posters, viewing the site in different languages and the potential to use age progressed photographs. Cases on the site include runaway, abducted and abandoned children.

The idea for the site-originated from The National Centre for Missing and Exploited Children, a non-profit organisation in the USA. A Met police officer who visited the Centre in 1997 viewed their website for missing American children and brought the concept back to London. The UK project is being funded by generous donations from the project's main sponsors Computer Associates International, Inc., that designed and will continue to host the site and also support from Virgin and Sun Microsystems.

"The site has the potential to enable us to reach into the homes, workplaces, and other cyber sites across the globe with a plea for people to help find those children who have gone missing," said Chief Constable Peter Sharpe of Hertfordshire Constabulary, Vice Chairman of the ACPO General Policing Committee and representative for issues concerning missing children in the UK. "The police and other organisations which have a responsibility to safeguard children must embrace all that today's technology can offer in helping us to find them and in looking after their welfare."

Hertfordshire Constabulary's Child Protection and Investigation Unit and the Metropolitan Police Services Missing Persons Bureau will input information to the site. Initially, the site will show eleven missing children from the London area. Detective Superintendent Ian Brown, Head of the Met's Missing Persons Bureau said, "Thankfully we do not have too many missing children to include on the site but if we can find just one of these children all the work will have been worth it."

At the end of the six months trial it is hoped other forces across the country will be brought on-line and the service extended to include all vulnerable missing persons.

AVOIDING THE PITFALLS OF UNREQUESTED TRANSFER

An assailant has fled after an attempted armed robbery at a railway ticket office during which a railway worker is left injured.

Police are called to the scene and they arrest a man matching a description of the suspect. There is enough forensic evidence for the suspect to be tried, but as the defence starts to probe the integrity of this material, serious cracks appear in the prosecution case.

This common but avoidable scenario forms the basis for 'Unrequested Transfer' a new training video which was premiered at Essex Police Headquarters, Springfield in Chelmsford on February 4, 1999.

Produced by Essex Police TV Unit as a courtroom based drama the video has been designed to highlight basic problems encountered when dealing with potential forensic evidence.

The project which is jointly funded by British Transport Police, Kent County Constabulary and Essex Police also marks the first time all three have collaborated on a project of this nature.

The initial concept came from British Transport Police and issues addressed include fibre transference, gunshot residue and blood spillage.

The video which features professional actors in the main role can be used in conjunction with a structural tutorial or to develop forensic knowledge.

For further details of the video which is on sale at £18 telephone the Essex Police TV Unit on 01245 452 955

A scene from 'Unrequested Transfer'

A DESIGN FOR LIFE

A YORKSHIRE company which helped Britain to make history has been hailed as a market leader with its latest product.

Huddersfield-based Aireshelta Ltd designed the world's largest inflatable garage which helped the Thrust supersonic car team to smash the world land speed record and sound barrier.

Now it has devised an inflatable Aireshower decontamination unit which has just been named as a Millennium Product by the Design which describes it as being at the forefront of innovation and creativity. This means the invention will now be shortlisted for a possible starring role in London's Millennium Dome.

Aireshelta's success was announced by the former Trade and Industry Secretary Peter Mandelson and came as a direct result of Prime Minister Tony Blair's challenge to businesses to show that Britain is still the world's creative powerhouse.

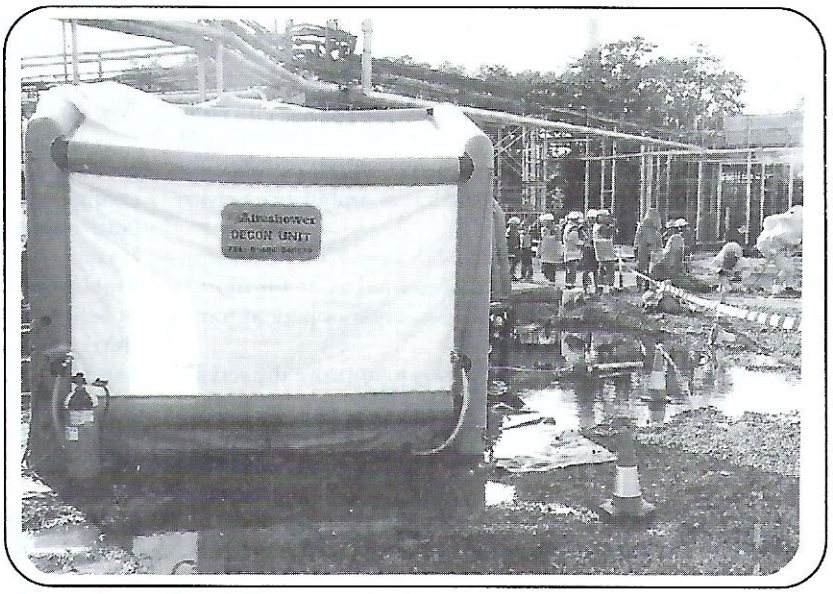
Aireshelta Managing Director Richard Bailey said: "We just couldn't resist the challenge. All Britain's health authorities and ambulance services now have a legal responsibility to provide effective decontamination for both rescuers and victims in the wake of chemical spills. The Aireshower can be inflated within five minutes of arriving at the scene of a disaster, but can also be kept neatly packed away in casualty departments and then inflated outdoors to clean any casualties who have made their own way there.

"It's an invention that saves on both the cost and space of building permanent decontamination suites in already space-starved accident and emergency units. Sunderland Royal Hospital has already invested in an Aireshower and health authorities across Britain are now interested."

Design Council Chief Executive Andrew Summers said: "The Aireshower is part of our collection of the most innovative products and services created in Britain for the new Millennium. "

The Aireshower - which includes its own hot water and warm air supply - has been designed in consultation with the Ambulance Service Association Working Group On Major Chemical Incidents. It is roomy enough to take either two stretchers or six people standing up and the decontamination process is complete in minutes with the water contained in the shelter.

Aireshelta also makes inflatable buildings for emergency services and armed forces worldwide.



MAPPING BRITAIN IN THE NATIONAL INTEREST

Late in 1998 Ordnance Survey signed a groundbreaking seven-year agreement with the British Government to provide improved mapping services for the nation.

Key provisions included the acceleration of the updating of detailed maps of rural areas and major improvements to Ordnance Survey's national computer database.

Resources are also being provided to speed work on national coverage of a new generation of both 1:10.000-scale and 1:25,000-scale mapping and there is investment to ensure that details of all administrative and electoral boundaries in Britain are kept up to date.

The National Interest Mapping Service Agreement (NIMSA) identifies all the services towards which the Government will contribute £42 million over the first three years of its life, starting on 1 April 1999. Funding for the remaining period of the agreement will be the subject of future negotiations.

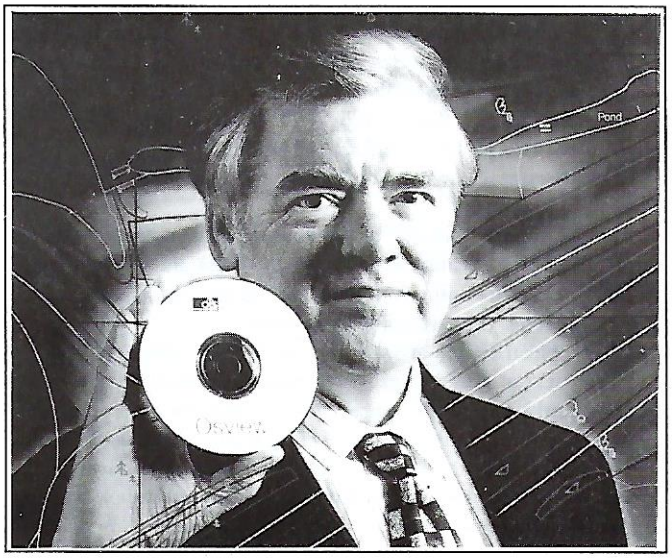
The agreement was signed on the opening day of the Association for Geographic Information's annual conference in Birmingham. Signing on behalf of the Government was Mr Alan Oliver of the Department of the Environment, Transport and the Regions, who is Chairman of the Interdepartmental Group on Geographic Information (IGGI). Ordnance Survey was represented by its new Director General, Dr Geoffrey Robinson CBE. Lord Chorley, President of the AGI, outlined the immense significance of the event to delegates.

Dr Robinson commented: "This major investment reflects the Government's recognition that Ordnance Survey's work is vital to the national interest even though some parts of it do not meet specific commercial needs. We will now set out to recover the lost ground of recent years caused by our inability to make all the necessary investments.

"The agreement is a huge boost for Ordnance Survey, and it will bring major benefits to public services."

Among the services the government will be funding are:

- *Undertaking and recording tidal surveys, including the regular revision of mean high and low water marks around the British Coast and*
- *Delivering the most appropriate mapping at high speed in emergencies, such as when a plane crashes or a coastal oil spill occurs.*



£2.5m AMBULANCE PATIENT TRANSPORT CONTRACT *Agreed*

A major new contract to transport hospital patients in the North has been agreed between Ambulance Trusts and hospitals in Newcastle.

The contract, which comes into effect on April 1, is worth just under £2.5 million a year and will last for five years. It involves the transport of all non emergency patients using the Freeman Hospital, Royal Victoria Infirmary and parts of Newcastle General Hospital.

The agreement follows a joint bid by Northumbria Ambulance Service NHS Trust and Durham County Ambulance Service NHS Trust(which are planning to merge)to provide ambulance services for two million people living in Northumberland, Tyne and Wear and County Durham.

The Secretary of State for Health, Frank Dobson, is currently considering the merger plans following a three month period of public consultation. If the plans are agreed, the contract will be carried out by the new Trust, North East Ambulance Service NHS Trust.

Northumbria Ambulance Service NHS Trust Chief Executive Laurie Caple said the contract represented value for money and the guarantee of excellent non-emergency patient transport services for the next five years.

' This will give us the long-term stability to improve the service to meet the changing needs of patients. It will involve around 300,000 journeys a year and the transport of all non emergency patients in the Northern region to and from the hospitals in Newcastle.

"It is the result of the close partnership and joint working that already exists between the two Trusts and augurs well for the future and for the successful provision of high quality ambulance services into the new millennium."

Durham County Ambulance Service NHS Trust Chief Executive, Robert Alabaster, added:

"The service will involve nearly 90 staff and 41 vehicles based at ambulance stations across the area and will give us the flexibility to ensure we meet Government targets of transporting at least 95% of patients to hospital within half an hour of their appointment time.

"We shall also work to reduce the length of time patients have to wait for return journeys after hospital treatment and our overall aim will be to provide services that are cost- effective but caring and meet the needs of patients."

Non emergency patient transport for patients using the Freeman Hospital is currently provided by Northumbria Ambulance Service NHS Trust in a three-year contract agreed in September 1996. An earlier contract awarded to a partnership between Exel Logistics and Durham County Ambulance Service NHS Trust and agreed with the Royal Victoria Infirmary for non emergency patient transport, is due to finish at the end of March.

BACK PAIN DOES NOT KILL
IT TORTURES

If you visit the Website of the National Back Pain Association, you are greeted by the above message, which runs repeatedly as a constant reminder of the debilitating effects of back pain.

Back pain sufferers, themselves, need no reminder.

They live with the situation every day. The limitations which it imposes on their lives, vary from restrictions in their ability to carry out simple domestic jobs to severe constraints on mobility, particularly in the case of chronic back pain sufferers.

Many people receive back injuries at work and the NBPA report that in any single year there can be as many as half a million work related back illnesses.

Once you realise the extent of the problem and the impact on the lives of back sufferers, you are then faced with the massive impact back related illness has on productivity.

NBPA report that in 1996/7, 119.8 million days'certified incapacity were due to back related illness.

In terms of cost that translated into a loss of production valued at £6 billion.

Within the National Health Service, lifting and carrying is a recognised feature of many people's work and it is hardly surprising therefore that nurses head up the league table of back sufferers. They are not alone however.

Ambulance Crew are also high on the chart of heavy lifters but the nature of their work is such that most of their lifting is manual, working in confined areas which preclude the use of lifting aids.

Not surprisingly, the incidence of back problems is high. Figures just released by the Health and Safety Executive confirm that in 1997/98, there were over six hundred incidents of ambulance crew back injuries, resulting in three days or more lost.

There is a fast growing awareness within the industry of the implication of back injuries and the cost to the National Health Service. Training in the techniques of lifting and carrying has long been part of ambulance crew procedure but any added mechanical assistance to reduce their efforts must be welcome.

This is where AntBoxx enters the equation.

Currently being introduced to the British market, AntBoxx is specifically designed to make ambulance crews' lives easier.

The AntBoxx is an American product under sole license to Spencer UK Ltd.

The unit consists of a battery-operated power pack, which can be fitted to the leading models of ambulance trolleys in two hours or less.

It delivers powered assistance equivalent to 80% of the lifting effort normally required to raise patient and trolley and provides full weight support during the lowering of patients.

Loading onto the ambulance is made easier because the trolley undercarriage is raised under power and both crew members can support the trolley as it is loaded.

Smoothness of operation means that patients have a more comfortable transfer and should a crew member lose their footing under slippery conditions, the AntBoxx will secure the trolley from collapse.

AntBoxx can be fitted to existing Ferno 35A and Stryker Rugged ambulance trolleys in two hours or less, providing immediate power lift assistance to ambulance crew.

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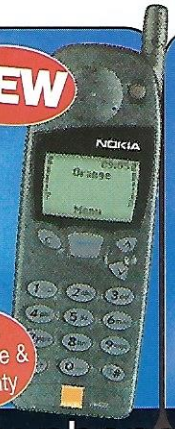

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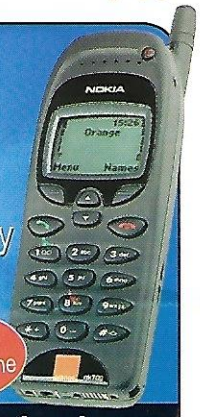

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