

# On Her Majesty's Service

WASC  
182

WASC 1821

~~ITEM VOID~~

Profile - Newspaper  
of Royal Ordnance  
P 4-5 History of  
WARGM



# PROFILE

The newspaper of Royal Ordnance

May 1990



## Up, up and away...



Just publicity-seeking hot air, or is Royal Ordnance going up in the world? The new balloon at a test inflation near the factory of its Bristol makers Cameron Balloons.

Weather and safety regulations permitting, visitors to the British Army Equipment Exhibition at the beginning of June will see an enormous Royal Ordnance logo and crest floating above the skyline as they enter the Aldershot site.

The company has sponsored a Royal School of Artillery hot air balloon and as part of the deal the Gunners have agreed to have the distinctive company insignia emblazoned on its canopy.

BAEE will be the scene of the balloon's first outing, but the craft will fly at major events over the next ten years as part of this unusual sponsorship arrangement.

Head of public affairs Brian Davis commented:

"A balloon is obviously an attention-grabbing device and there can be few better ways of gaining the company publicity. We hope it will be in use at BAEE to take invited journalists and VIPs aloft."

•Products from all four divisions will be on show at BAEE, displayed under one of the company's five main themes for the show.

The themes are cost-effective modernisation; additional effective range; collaboration; rapid deployment; and training and simulation.

Report: Mike Sweeney

## TREBLE TOPS FOR UNDER-25 FUND-RAISERS!

Royal Ordnance sites — Bridgwater, Westcott and Radway Green — were filling the top three places at the last count in the BAe-wide Charity Challenge league.

This morale-boosting 1-2-3, revealed in figures released on April 11, was backed up by another coup: all ten company factories were in the top 20 slots in the 34-site league.

Bridgwater had a commanding lead with £47.76 for charity raised from every under-25 at the Somerset factory. Westcott came up with £24.42 for each young employee. And Radway Green had collected £17.47 per head. In fourth place was Rover's Gaydon site with £15.06 each.

Since then figures for Royal Ordnance only were released

as Profile went to press showing that Bridgwater has almost doubled its haul to an astonishing £91.14 per head!

Westcott has raised £30.24 while Birtley has just overtaken Radway Green with £22.86 to the Cheshire site's £22.35.

These figures come just after the half-way stage in the competition which has until the end of August to run.

Challenge co-ordinator

Maureen Sawtell warned against taking things easy:

"Dynamics have a company-wide car raffle coming up and all our sites need to step up their activities if we're going to win the Charity Challenge Cup. If anyone has any good ideas, please pass them on to those sites who may be struggling."

•New Charity Challenge business-by-business league. See page 3.

## Ian gets 'air'-Bourne for Charity Challenge

Childline benefitted by over £500 when Ian Bourne took to the air to raise money for the the Professor Smith Charity Challenge.

The Radway Green planning engineer is a qualified pilot and he put his skills to good use by flying a Piper Warrior around the Welsh and southern English coastlines before returning north to Liverpool Airport.

A vacant seat was auctioned to the highest bidder, Radway colleague Jim Harrison.

The 931-mile flight took 12 hours and 25 minutes to complete with touchdowns at Swansea, Exeter, Southend and East Midlands airports to collect the previously positioned Childline collection boxes. Actual flying time totalled seven hours and ten minutes.

The flight created a great deal of interest, both locally and at the airports visited.

Ian's voice was heard over the airwaves of BBC Radio Stoke, Trent and Devon, and articles on the flight made the local press.

He received a tremendous welcome at Exeter where Miss Exeter Leader presented him with £70 collected from the airport passengers.

Weather conditions were favourable although the ride got a little bumpy when the plane hit some turbulence along the east coast.

Ian will be grounded for his

Ian's charity flight route: 1,035 miles from Liverpool to Liverpool for the children's help organisation Childline and Radway Green's bid in the Charity Challenge.

next Charity Challenge activity when he joins Project ACE colleagues John Smith and Nick Baldie on the Yorkshire Three Peaks Walk.

Picture on page 3.



## Two new BAe share dealing schemes unveiled

Two new schemes to help personal investors — including employees throughout the group — have been announced by British Aerospace. A Savings and Investment Scheme and a Personal Equity Plan will simplify and reduce the cost of dealing and investing in its ordinary shares.

The new plans complement the existing scrip dividend facility and employee share schemes.

•The British Aerospace Savings and Investment Scheme is arranged by Hoare Govett and will allow investors to buy or sell any number of ordinary shares for a basic commission of 1% — with no minimum charge.

•The British Aerospace Personal Equity Plan - arranged by CC&P Trustees - will enable investors to buy shares or transfer an existing holding into a special low-charge Personal Equity Plan so that dividends and any capital gains can be received free of all tax.

Professor Roland Smith, the chairman of British Aerospace, commented:

"British Aerospace is the first industrial company to introduce a savings and investment scheme. The combination of the savings and investment scheme and the personal equity plan gives shareholders an unparalleled choice.

"There are 125,000 employees in the British Aerospace group, many of whom have participated in previous share and option schemes. This new opportunity will enable employees to continue to invest directly in their own business performance.

"Many of our investors became shareholders as part of the privatisation process and we feel a keen sense of responsibility that they should have access to a cost-efficient dealing system. I think our shareholders will welcome these new ways of buying and selling British Aerospace shares."

(More on page 2)

Royal Ordnance is a British Aerospace company





# Ammunition Division changes announced

Changes in the organisational structure of Ammunition Division have been announced by its managing director Phil Lee.

In a message to employees he explained the main aim of the changes was to increase management accountability.

The changes are:

•Sales operations manager **John Anderson** has been appointed **Bishopton general manager**. **Jim Wallace**, the operations manager at Bishopton, remains as a prominent member of the management team.

•**David Morris**, formerly divisional quality manager, has been appointed **general manager at Birtley**. **Ian Siddle** remains at Birtley as a prominent member of the strengthened management team.

•**Gordon Bulloch**, formerly operations manager at Bridgwater, becomes **general manager of the site**.

•**Bill McCartney** has been appointed general manager at **Chorley**. Bill was divisional chief manufacturing engineer until the move.

•**John Quillin** remains at

**Glascoed**, as general manager rather than operations manager.

•**Bill Turner** is confirmed as general manager at **Radway Green**. This is a divisional management committee appointment. Bill was formerly special projects director.

•**Adrian Foxton**, formerly operations manager at Chorley has been appointed **divisional quality manager**, reporting directly to Phil Lee.

The message emphasised that site managers must have direct responsibility for all the resources they need to meet

their objective of meeting time, quality and cost requirements on output.

It continued: "Functional directors will retain overall responsibility and accountability through strong functional management lines, for policy, specification of divisional systems and operation of best professional practice within their functional area."

"The technical directorate will continue to operate as a separate entity, providing support to the general managers as required on day to day product-related issues."

## ON SHOW AT FIDAE 90



The President of Chile, **Patricio Aylwin**, was a visitor to the Royal Ordnance stand at his country's defence exhibition, **FIDAE 90**.

He is seen being introduced to marketing director **Chris West**.

On display at the show were artillery ammunition, the **Light Gun**, **81mm mortar**, **LAW 80**, **CET**, aircraft ammunition and a selection of rocket motors.

## BAe shares — THE TWO SCHEMES IN DETAIL

### BAe Savings and Investment Scheme

The savings and investment scheme has been designed by **British Aerospace's stockbroker Hoare Govett Corporate Finance**, which has a team specialising in share dealing schemes for the employees of corporate clients.

It is intended to help the many personal investors, including employees, who have modest numbers of British Aerospace ordinary shares and might want to build up their holding or, alternatively, to sell all or part of it.

Hoare Govett is providing a postal dealing service in which orders will be aggregated at the end of each stock exchange account. Dealing dates have been fixed until the end of 1991. The basic commission is 1% - with no minimum charge. This is considerably lower than the rates charged by most banks and stock-

brokers and should be of particular interest to British Aerospace's small investors and employee shareholders (a basic £5 for £500 transaction, less for smaller deals). The regular savings scheme is for monthly investments of £50 or more.

This is thought to be the first such scheme for a UK company which is not an investment trust; it is very different from the schemes which give shareholders a one-off opportunity to sell their shares. This scheme is clearly more appropriate for a company which wishes to encourage wider share ownership, especially by employees.

Hoare Govett's aim has been to create a simple, low-cost service for personal investors who would otherwise find the cost of dealing in British Aerospace ordinary shares disproportionate to the value of their investment.

### BAe Personal Equity Plan

The **British Aerospace Personal Equity Plan** has been designed and will be managed by **CC&P Trustees Limited**, the corporate PEP specialists.

A PEP plan is a plan in which up to £6,000 a year can be invested in ordinary shares, giving the investor two significant tax benefits. Tax is not charged whether on the dividend income from shares held in a PEP or on any capital gain made when the shares are sold.

But the **British Aerospace Personal Equity Plan** also has further attractive features.

- The investor pays no initial charge when he makes his investment.
- The annual management charge is only 0.5%.
- Because the plan is dedicated to BAe ordinary shares, there are very low dealing costs: brokerage for share transactions is 0.25 per cent.
- There are various ways of investing: by cash lump sum, by regular savings, by transferring from an existing PEP, or by selling an existing holding of BAe ordinary shares and buying ordinary shares back through the plan. A lump sum investment can also be combined with one of the other methods.

#### Flexibility

Investments can be made at any time and shares may be held in the plan for as long or short a time as the investor wishes. Dividends can be reinvested or paid directly.

If investors want to receive further dividends and any capital gains free of tax, they can make lump sum or regular payments or transfer an existing holding (up to £6,000 in the current tax year) in the **British Aerospace Personal Equity Plan**.

If they are eligible for PEPs or do not wish to use a PEP dedicated solely to the **British Aerospace shares**, they can make lump sum or regular investment or, alternatively, sell all or part of their holding using the **British Aerospace Savings and Investment Scheme**.

### Further details

Further details of the **British Aerospace Savings & Investment Scheme** are available from:

**Hoare Govett Corporate Finance**  
4 Broadgate  
London  
EC2M 7LE  
Tel: 071 601 0101

Further details of the **British Aerospace Personal Equity Plan** are available from:

**CC&P Trustees Limited**  
26-28 Bedford Row  
London  
WC1R 4HF  
Tel: 071 242 8998

## PROFILE

Profile is the company newspaper of Royal Ordnance. It is distributed free of charge to all employees and a limited number of copies is available to outside readers.

The editor takes every care in ensuring accuracy but neither he nor the company can be held responsible for any errors in editorial material. The views expressed in Profile are not necessarily those of the company.

All material is Royal Ordnance copyright but may be reproduced with the editor's permission.

Contributions and letters are always welcome and every care is taken with submitted material, but no liability can be accepted for items lost or damaged in transit.

Royal Ordnance is a British Aerospace company.

**Editor:** Mike Sweeney, Royal Ordnance plc, Euxton Lane, Chorley, Lancashire. PR7 6AD.

**Telephone:** (02572) 65511 x2613.

**Fax:** (02572) 60614.

### CORRESPONDENTS

**11 Strand:** Howard Borington x2073

**Birtley:** Kathryn Glendinning x3991

**Bishopton:** Fiona George x3930

**Blackburn:** Audrey Jackson x3112

**Bridgwater:** Mike Russell x4181

**Chorley:** Gill Harris x2501

**Glascoed:** Jenny Sullivan x2501

**Nottingham:** Lorane Scott x3680

**Radway Green:** Janet Palin x3943

**Westcott:** Chris Abraham x2712

**Royal Ordnance**

**Speciality Metals:** Mike Turton x221

**Summerfield:** Dai Thomas x2126

**Ammunition Division PRO:**

Wendy McPherson Chorley (75) 2655

### June deadlines

June's Profile will be published on **Monday, June 18**. The deadline for this issue is **Friday, June 1**.

All copy and pictures should with the editor by that date except for late business news stories arranged in advance.





Challenger 2: DAS could offer such high-value vehicles protection against a wide range of threats.

## Tank defence system group formed

Royal Ordnance has formed a consortium with three other UK companies to offer a customised defensive aids system (DAS) for tanks and other armoured fighting vehicles.

The other Firmguard members are GEC-Ferranti of Edinburgh, Ferranti Instrumentation (Manchester) and MEL, based in Crawley.

The consortium is designing a system to detect approaching weapons and trigger a purely defensive response.

Threat sensors might include laser and radar warning receivers, radar trackers and proximity fuzing sensor. Data from these would be used to trigger countermeasure systems.

Such countermeasures might include visible and infra-red screening smoke, infra-red and radar obscurants, infra red and multi-band flares, infra red decoy beacons and other

electro-optical countermeasures, in addition to radar noise transmitters, radar repeaters, corner reflectors and millimetric chaff.

A defensive aids system might also incorporate reactive armour, or its future cousin active armour, which is triggered before contact.

Customised defensive aid systems (DAS) are being devised by Firmguard's privately-funded research and development programme. The consortium will carry out a comprehensive "threat analysis" for a customer and propose a DAS "suite" from a selection of sensors and countermeasures.

Each DAS will be designed to protect the host vehicle against attack by missiles, indirect fire top attack munitions and other threats.

Firmguard has already been contracted by the RARDE (the

Royal Armaments Research and Development Establishment) to carry out the CAWSEM (Countermeasures and Weapon System Engagement Model) programme which started in November 1988. A complex computer model is used to simulate a battle and highlight and evaluate promising technologies suitable for vehicle defence.

Sales manager Chris Gallagher pointed out: "The future of defence technology in Europe could well be influenced by the current NATO/Warsaw Pact talks on weapons reductions — the Conventional Forces Europe negotiations.

"The outcome of these talks is likely to be that fewer high-cost weapon systems will be allowed on each side. As a result it will be increasingly important that these systems be given the maximum possible protection. DAS is designed to do that job."

## It's Royal Ordnance against the rest!

A business-against-business Charity Challenge plaque shoot-out has joined the site-by-site cup league — and Royal Ordnance is lying second behind BAe Dynamics in the first published results!

The plaque competition was launched to take advantage of the strong business loyalties that were seen to emerge with the Charity Challenge competition and to give larger sites (which are perhaps at a disadvantage in the cup) a chance to share in the glory.

Each BAe business has been set a target based on the number of under-25s it employs. The winner will be the one which achieves the highest percentage of this figure.

### Car-bolic...

Birtley apprentices gave up their morning sports one Friday to clean cars at the factory for the Professor Smith Challenge. Their success in getting through 140 vehicles at a very reasonable pound a time means the event is likely to be repeated.

An Easter fancy dress disco held in the sports and social club raised £127 to take the Birtley total over the £2,000 mark.

"It would be fantastic if we could win the double and, lying second in the plaque plus having the top three places in the cup, we have a real chance," said co-ordinator Maureen Sawtell.

Keep up the good works!



THE PROFESSOR SMITH  
CHALLENGE 1990

### Big push!



Glascoed typist Laura Mynard was "driver" of a specially-prepared racing bed propelled around the site. All concerned ended up soaking wet, as did anyone who didn't donate enough money to the cause... The result was a cheque for £466 which was presented to Mr Thomas from Welsh Cancer Research by production manager Mel Ollerton.

## Ian's Exeter pick-up point



Ian Bourne makes a quick landing at Exeter to relieve Miss Exeter Leader, Faradah Leighett, of a collection taken for his round-the-coast Childline flight (See page 1).

### Site co-ordinators

Bishopton Dixon Drye  
Birtley: Tony Duckworth  
Bridgwater Gerald Benneworth  
Blackburn Barry Anderton  
Chorley Ray Lilley  
HQ Wendy McPherson  
Glascoed Arthur Thorpe  
Nottingham John Wheat  
Radway Green Janet Palin  
Summerfield Carol Fullelove  
Westcott Ed Andrews  
Company co-ordinator  
Maureen Sawtell Chorley x2495  
Challenge organiser  
Arthur Mitchell Chorley x3568

The May crossword has been held over until the next issue due to lack of space. Our apologies.

If you have any news or views for Profile, get in touch with your site contact or the editor. Their phone numbers are on page 2



1821

# WALTHAM ABBEY

Nobody knows precisely when Waltham Abbey gained its first links with gunpowder. The first possible connection is during the reign of Queen Elizabeth I, in 1561, with official letters to one John Thomworth of Waltham Abbey about the import of gunpowder ingredients from Italy.

Although there is no direct link with Waltham Abbey, it appears that it was also about this time that gunpowder-making was stepped up in Britain as the result of concern over the shortage of gunpowder for the Royal Navy.

Certainly, by the 1660s private production of gunpowder at Waltham Abbey was definitely established in the hands of Ralph Hudson. Several generations of the Walton family took over until Sir William Congreve became involved, of which more shortly.

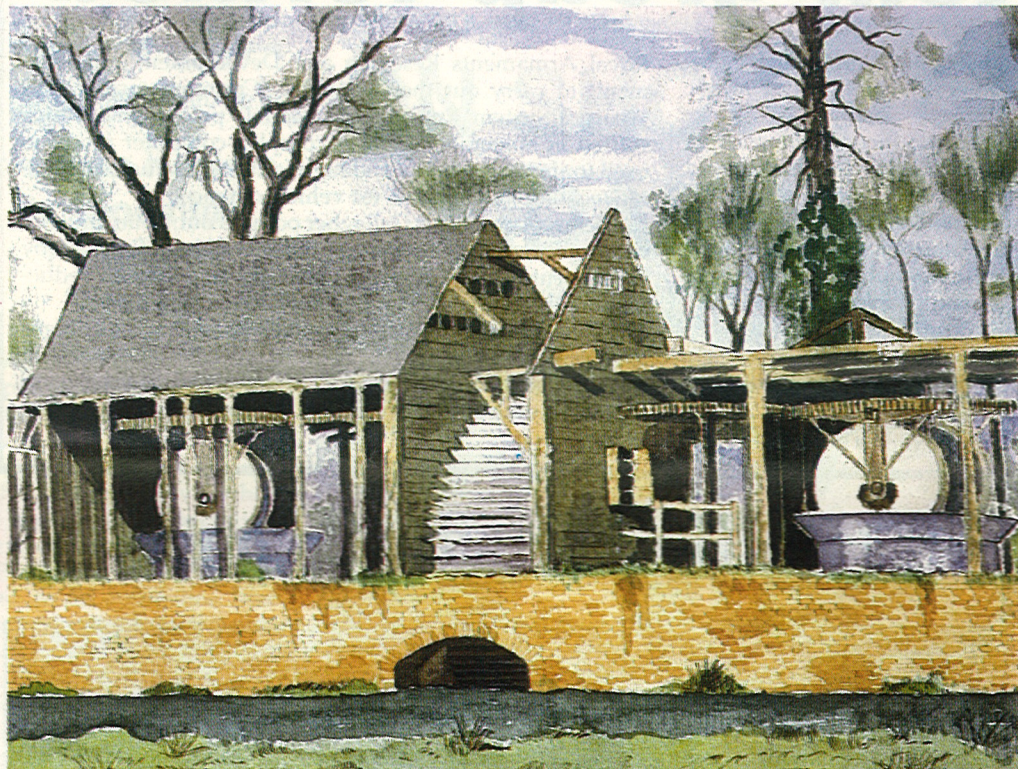
In the first definite reference to the mills at Waltham, Dr Thomas Fuller, Curate of Waltham Abbey wrote in 1662 that: "It is questionable whether gunpowder be more profitable or dangerous. The mills in my parish have been five times blown up within seven years but, blessed be God, without the loss of any one man's life."

Sir Thomas also gives a splendid, if not entirely scientific composition of gunpowder:

1 Brimstone, whose office is to catch fire and flame of a sudden and convey it to the other two.

2 Charcoal pulverised, which continueth the fire and quencheth the flame, which otherwise would come the strength thereof.

3 Salt-Petre, which causeth a windy exhalation and driveth forth the bullet.



A water colour of an old gunpowder mill at Waltham Abbey. The River Lee provided both power to turn the mill wheels and transport: barges carried gunpowder barrels down to the Thames estuary.

## — FOUR CENTURIES OF HISTORY

Explosives manufacture at Waltham Abbey has ceased and the site is to be returned to civilian use. The site's story starts with gunpowder mills being founded some time in the latter part of the 16th century. Waltham Abbey expert Malcolm McClaren spoke to Mike Sweeney about the site's history.

### Suspensions

About 12 years ago a receipt was turned up in the public records. It referred to 18 hundredweight of powder which appeared to be for private use by a gentleman living near Waltham Abbey. Even the most avid sportsman would have had trouble using such a quantity and suspicions must be heightened by the date on the document. 1605 was the year of gunpowder treason and plot.

Not conclusive proof that it was Waltham Abbey powder which was stacked under the Houses of Parliament by Guy Fawkes and his co-conspirators, but...

In 1787 Sir William Congreve bought Waltham Abbey for the government at a cost of £10,000. He spent a further £35,000 on improvements but the erstwhile owners claimed that nationalised powder was inferior. A row "blew up" until Sir William organised some comparative trials on the Marlborough Downs.

The results would be crucial because this was the time of the Napoleonic Wars. Ten-inch shells and nine-pound charges of powder from different makers were loaded and fired. The Waltham Abbey-propelled shot flew a decisive 4,430 yards, 160 yards further than the nearest rival and 500 yards further than most. The matter was considered closed.

### Employees

At the height of the wars with France, 250 people worked at the Powder Mills and they turned out 25,000 100lb barrels a year. Processes invented by Sir William Congreve's son (also Sir William) were still used by Nobels until their gunpowder production ceased in 1976.

Although the elder Sir William did more for the Waltham Abbey factory, it was of course this younger Sir William Congreve who invented (or turned to military use) the artillery rocket, which was actually a

more successful weapon than is often credited — Copenhagen was burnt out by his rockets and they are remembered in the "rockets' red glare" of the United States national anthem.

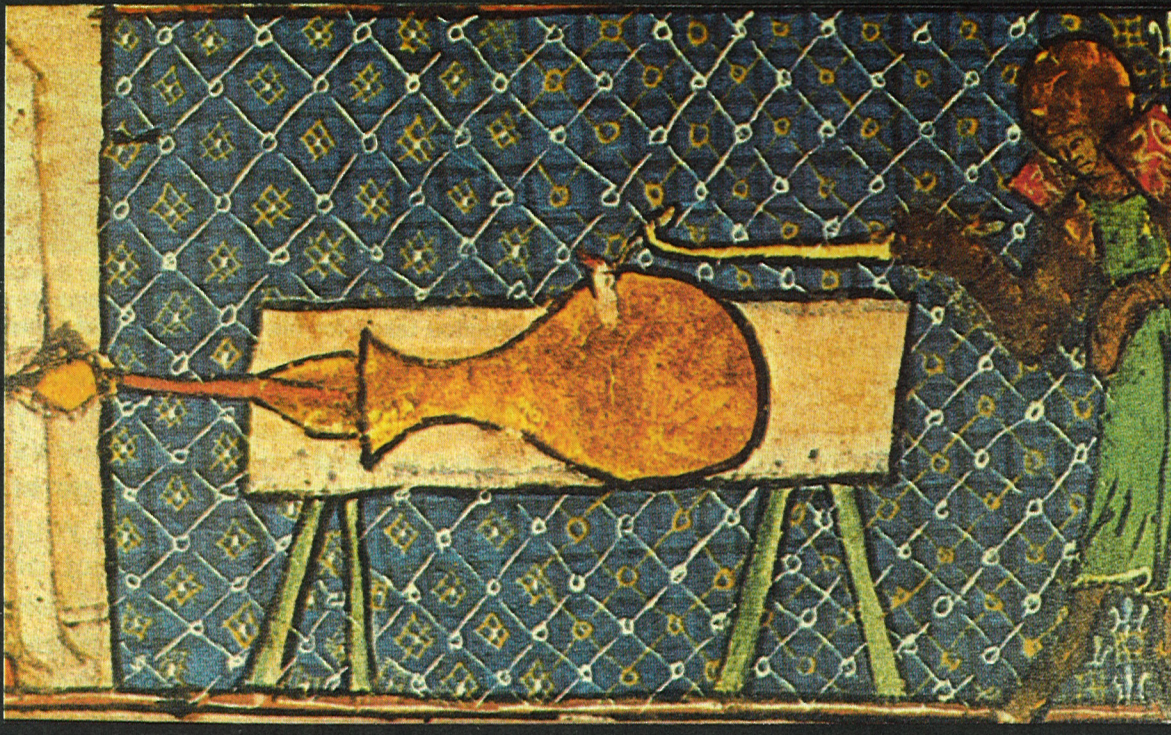
The industrial revolution in the early part of the 19th century and the attendant interest in chemistry was the spur for the next major phase at Waltham Abbey. Guncotton (nitrocellulose) was patented in 1846 followed by nitroglycerine the following year.

A series of major explosions at plants all over Europe delayed the introduction of these materials — their manufacture was initially banned at Waltham Abbey — but once the problems were understood and overcome, production began.

### Cordite

In 1891 manufacture of cordite, a revolutionary new smokeless gun propellant with four times the power of "black

## Gunpowder before Waltham Abbey



Gunpowder dates back to the ninth century and the Taoist Chinese alchemists who first combined the ingredients of saltpetre, sulphur and charcoal.

They used it mainly for making impressive flashes and satisfying quantities of smoke to drive away demons, but its more destructive qualities were already known, the result of not a few singed beards and destroyed buildings.

The Arabs knew saltpetre as "Chinese Snow" a few centuries later at the height of Arabic influence and learning and it was probably through them that Europe learned of gunpowder.

In the decade from 1240 the English monk Roger Bacon carried out many experiments into gunpowder and its explosive properties.

Even at that time he was aware of the potential danger of publishing the results of his studies and he gave the composition of gunpowder in code — an anagram, which was wasn't fully cracked until 1904!

The earliest known illustration of a gun dates from 1327 and it was 20 years later that one was used in battle, at Crecy in 1346, although there are reports of earlier siege weapons.

Hamburg and Antwerp were the centres of gunpowder trade until the Waltham Abbey connection, although in 1346 the accounts of Edward III showed the purchase of several hundred pounds of saltpetre and sulphur for his guns.

Left: A medieval knight takes his life in his hands. This is the earliest known picture of a gun (in this case a siege weapon) and dates from 1327.





The Royal Horse Artillery Rocket Troop fire Congreve rockets circa 1833.



powder", began at the site. By 1895 500 tons a year were being produced.

To make it, a factory was erected on Quinton Hill, a one hundred-acre plot of land on the southern side of the factory bought six years previously. As demand for the new propellant increased, buildings in the old part of the factory formerly used for gunpowder production were converted for cordite manufacture.

### Stable

This early cordite was made, surprisingly, from a mixture of two explosives, nitroglycerine and nitrocellulose, plus a small quantity of vaseline. This was originally introduced to lubricate the bore of the gun for the passage of the projectile but was later found to prevent deterioration of the propellant in hot climates.

The new substance was much more stable than either ingredient. (Nitroglycerine is, of course, an alarmingly capricious substance, liable to explode at the slightest shock.)

Smokeless gun propellants revolutionised warfare. Snipers and camouflage came into their own and longer engagement ranges were made possible by the more powerful propellants.

A feature on the gunpowder factory in the Strand magazine in 1895 referred to it as "that new and terrible explosive which eminent experts tell us will increase a hundredfold the carnage on the battlefield of the next European War in

which we are engaged."

Despite these prophetic words, the military were slow to appreciate the necessary tactical changes required and ten years after the introduction of cordite the British in South Africa were often baffled by Boer snipers firing at long range. Fortunately this lesson at least was learnt by the time of the First World War.

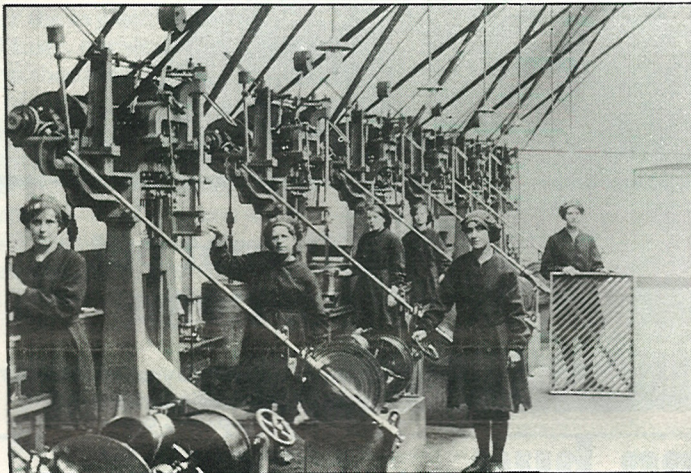
During World War 1 over 5,000 people were employed at Waltham Abbey, over half of them women. For a time the site was the only government-owned manufacturer of explosives and when other sites were set up staff from the Royal Gunpowder Factory were transferred to supervise operations.

### New materials

After the Great War, production decreased to be replaced to a large extent by increased research and development work. The booster explosive tetryl had already been produced there since before the war, but new materials and processes, such as RDX, picrite and a continuous TNT production method were developed.

As early as 1933 the rundown of production was reversed because of the deteriorating international situation. Once again, however, the factory was the country's major explosive producer for the first two years of the Second World War until new factories, such as those at Bishopton and Bridgwater, could be established.

The Royal Gunpowder Fac-



The First World War at Waltham Abbey and women join the labour force.

Above left: picking cotton for nails and other dangerous imputities before soaking it in nitric acid to produce guncotton.

Above right: operating machinery



The younger Sir William Congreve

tory was closed on July 28 1945, but re-opened two days later as an experimental station of the Armament Research Department. This became the Explosives Research and Development Establishment (ERDE) in 1948 and further minor changes led to another major reorganisation in 1977 when the Propellants, Explosives and Rocket Motor Establishment (PERME) was set up.

### Divided

Work on all these energetic materials continued at the integrated establishment until 1984 when as part of a scheme to privatise the Royal Ordnance Factories, the site at Waltham Abbey was divided

between the Royal Armament Research and Development Establishment (RARDE) and Royal Ordnance.

With the closure of the Royal Ordnance part of the establishment and the winding down of RARDE activities, it might not be long before the pleasant wooded site is returned once again to civilian use after over 400 years of explosive manufacture.

A fitting last word comes from William Fitzgerald, who concluded in his 1895 Strand piece: "The tremendous energy that lay dormant in every building oppressed us, even though that energy slept behind massive traverses and walls 10ft thick; so we came away."

## NO FLIES ON SUMMERFIELD SUPERCOOKS!



The Summerfield Supercooks! Catering supervisor June Dodd with the "Clean Food" award surrounded by her staff. Left to right are Beryl Lamb, Wendy Grosvenor, Marjorie Styles, Gary Longmore, June Dodd, Betty Crake, Rachel Stephens and Lyn Smith.

Summerfield has won a "Clean Food" award from its local district council — the first industrial establishment in the area to do so.

The Wychavon District Council congratulated the site on the high standard of food hygiene achieved and said that the award was in recognition of the management's commitment to staff training and good facility provision.

Summerfield operations manager Brian Lawrence said that he was "absolutely delighted" with the award which he added was the result of a lot of effort on the part of the hard-working catering team. Nine kitchen staff produce about 200 meals a day in a large kitchen with modern equipment.

• Summerfield has also applied for the Heartbeat Award. This is a national award presented by the Health Education Authority to premises which supply a high proportion of healthier dishes on the menu.

### Another success for Patricroft!

Tony Creedy, erstwhile member of the design and development department at Patricroft, has been promoted to manager grade engineer — in Australia!

Tony emigrated Downunder in 1983 to join their MoD.

He puts his success, against strong local candidates, down to the experience he gained at Patricroft.

Please note that the grand re-opening of Chorley's sports and social club on Thursday, August 9 is a "sportsman's dinner" and not a dance as indicated last month.

## Good housekeeping award for Glascoed's Group 4



Glascoed's production group 4 were this year's winners of the site's Good Housekeeping Cup, which is designed to create a friendly rivalry between the different areas of activity and play an important part in health and safety.

Above, senior overlooker Alan Davies accepts the cup from general manager John Quillin on behalf of the staff of the group, which produced the BL755 cluster bomb until recently but now concentrates on development projects.





At the back: Paul, Wayne and Mark Lewis.  
Front rank: Wayne Parker and David Jones

## Putting a best foot forward

— again and again and...

**Report: Bryan Morgan**  
One of the noticeable features of the South Wales Valleys town of Blaenavon is the apparent absence of any horizontal surfaces — the whole town clings to the side of a steep mountain. So what do mountain dwellers do in their spare moments?

Why, they climb mountains — for charity!

The five Blaenavonites concerned are Glascoed maintenance fitter Wayne Parker and his neighbours David Jones and the brothers Lewis — Paul, Wayne and Mark.

### Cancer research

The quintet are taking part in the Three Peaks Walk (no relation!) for Cancer Research, starting at Fort William on May 16 with a climb to the top of Ben Nevis to set the ball rolling.

Eight long walking days later the team will be scrambling to the top of Scafell Pike. The next leg of the journey will take them back to their Welsh homeland a further five days later, by which time they should be so fit that the ascent of Snowdon will probably be accomplished on the run!

Five more days' walking will see them back home after a total of 600 miles tramping.

The citizens of Blaenavon are noted for their willingness to hold a good celebration at the drop of a hat, so it's a fair bet that they will be received with a good deal of Welsh enthusiasm, a lot of singing and even more best bitter.

After all, the Blaenavon pubs have already had a whip-round to the tune of £245 and the boys haven't even left yet!

## LONDON MARATHON '90

### Gerry 'contracts' the running bug

**Report: Lorane Scott**

Gerry Arscott (age - not eligible for the Professor Smith Challenge) from the Nottingham contracts department, ran his first London Marathon clocking a very credible time of 3 hours 50 minutes.

Gerry took up running last year after taking his son to join Bingham Running Club and ended up enrolling himself, when it turned out that Junior was too young. His average weeks' training covers 40 to 50 miles and he said that the gales earlier in the year, although making the going harder, helped build up the stamina needed to complete the marathon.

### Soaking wet

The heavy rain at the start didn't help as Gerry got soaking wet in the 10 minutes it took to reach the starting post from the sound of the gun, thus slowing the warm up process a little.

Gerry hit the "wall" at 18 miles, when he got cramp in his right leg, which slowed him down virtually to a standstill.

With the encouragement of the crowds he, like many of the other runners, managed to carry on down The Mall - which he said could only be described as "daunting and very long".

A slight rise in the road just before the finish seemed like a

mountain after 26 miles but was not going to beat him so close to home.

As if the marathon wasn't enough, Gerry was out for a gentle jog the next day in preparation for a marathon the following Sunday!

Gerry intends to run again next year and would be pleased to hear from anyone who is interested in doing the same and accompanying him on training runs.



Left: Gerry Arscott who ran 3 hours 50 minutes at his first marathon attempt, thoroughly deserving his finisher's medal.

## Bad Gnus Tour\*

(\*It's an anagram of guns...)



**Report: Lorane Scott**

Move over Guns'n'Roses, here comes Guns and Vehicles!

Contrary to popular belief Lawn-mower Deth is not a fatal affliction suffered by grass cutting implements, but an up-and-coming heavy metal band, whose line-up includes two Nottingham employees.

They were formed in March '87 by none other than Mr Flymo whose original recordings included "Lawn-mowers Rampage in the Jungle" and "It's a lot less boover than a hover".

### Roll out the barrel

Mr Flymo was soon joined by three other strange characters including the small arms facility's infamous barrel straighteners Concorde Face Ripper (Steve Nesfield) and Mightymow Destruction (Chris Parkes).

Having just signed to the UK indie label Earache a debut album should be released by the end of the summer.

Currently rejoicing in the title "Oooh, Crikey", the album is likely to feature the tracks "Flying killer cobs from the Planet Bob", "Cob Woman of Deth" and "Weebles Wobble but they don't fall down".

Heavy metal publication Kerrang has already featured the band but Profile understands that a psychiatrist assigned to investigate the lads' fixation with greensward-gouging gadgets and gizmos is currently lying in a darkened room suffering from nervous exhaustion.

On the load again? Qualcast Mutilator, Schitzo Rotary Sprint Master, Concorde Face Ripper, Mightymow Destruction and Mr Flymo in Friday 13th meets Gardner's World.

## Fifty not out for CPSA

A couple of birthday cakes marked the occasion when the Civil and Public Services Association at RO Chorley held its fiftieth annual general meeting in March.

Phil Summers from Glascoed was the guest speaker at the meeting held in the sports and social club. A number of retired members attended to meet old colleagues and catch up on the gossip.

**Main pic: The only thing chequered about Radway Green apprentice Richard Chapman's racing career so far is the flag he's holding. Inset: the style that keeps him in front.**



## HOT RODDER RICHARD!

Richard Chapman is digging the dirt in his bid to gain qualifying points for the British Hot Rod Championship.

He is supported at the race track by his family and fellow Radway Green apprentices Peter Colclough (who took the photo) Melvin Astley, Alan Middlehurst and Peter Harris.

Second Year apprentice Richard races a two-litre Talbot Sunbeam built by himself, his dad (also an ex-Radway Green apprentice) and a friend who is a welder.

They began building the car in January this year and finished it just in time for Richard's first race at Crewe on March 24.

At only his second outing Richard gained three firsts and by the end of April had a creditable 18 points towards qualifying for the championship.

Races planned for the future include meetings at St Austell, Bristol, Taunton, Birmingham and Barrow-in-Furness.



*SEE THE 'SHOW OF THE CENTURY'*

A photograph showing four large, vintage-style cannons positioned on a baseball field. Each cannon is being operated by a team of men in military-style uniforms, including hats and breeches. The cannons are arranged in a diagonal line across the field. In the background, a scoreboard or advertisement for "NatWest" is visible on the outfield fence. The scene is illuminated by bright stadium lights, creating a high-contrast image.





## BRITISH AEROSPACE GROUP NEWS



# Revised Metro joins line-up ROVER 'HATCHES'

Yet another new Rover has joined the highly-acclaimed 200 and 400 models — this time it's a heavily revamped Metro.

Available in three and five-door hatchback forms, the car is all new from the dashboard forward and also has a completely restyled rear end. Different suspension and front seating position improve comfort and "driveability".

Perhaps the most important change is the adoption of Rover's low-maintenance K-series engine for all versions of the car. A top of the range GTi gets the 16-valve fuel-injected motor fitted to the 200 and 400 ranges which will take it to 114mph. New eight-valve, carburettor-fed 1.4 and 1.1 derivatives propel the rest of the range. All models also receive four or five speed versions of the new R65 gear-box fitted to the 1.4 200 and 400 cars.

### Aerodynamics

Better aerodynamics and a more modern look are the results of the body styling changes at each end. Together they are responsible for the length of the car growing by 4.6 inches and a drag coefficient reduced from 0.30 Cd to 0.36.

Fuel economy benefits from the new motor and more slippery shape with the 1.1-engined cars giving 50.5 mpg in all-round use and a diesel-like 63.7 at a constant 56mph. Even the GTi is claimed to return well over 40mpg in general use.

### Comfort

Improved footroom, altered pedals (no longer offset), gear lever, handbrake, steering column and safety steering wheel give more of a "big-car" feel to the driving position. A new front bulkhead is much better sound-proofed and attention has been paid to eliminating sources of annoying rattles and squeaks.

The Hydragas suspension system is much revised for a better ride but relatively minor changes were made to the well-regarded braking system. Corrosion resistance is improved by extensive use of zinc-coated steels and by plastic wheel arch inserts.

Retail prices range from £5,985 for the three-door 1.1C to £9,735 for the five-door 1.4GS.

**Right:** Substantial chassis, engine and styling changes for the Metro. Pictured below are the GTi 16v interior and the K8 1.1 SOHC engine.

# NEW BABY!

## ROVER ROUNDUP

Land Rover has won the Queen's Award for export achievements.

The award was granted for the period from 1987 to 1989 when direct export sales increased from £305 million to £462 million.

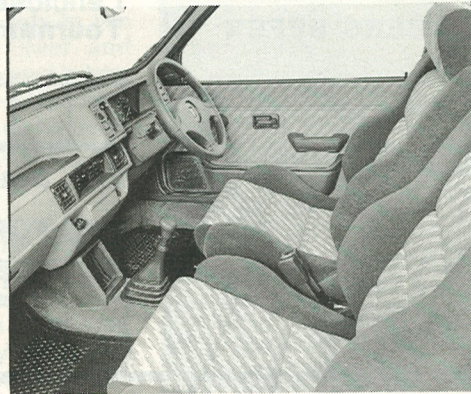
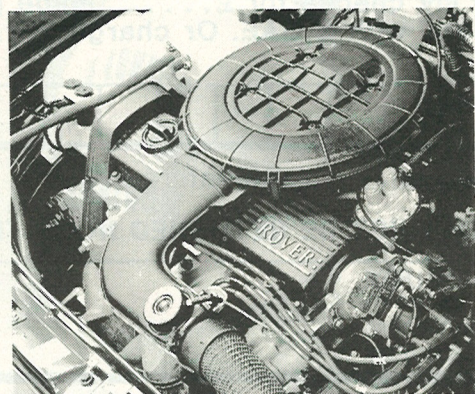
The Montego range has received a boost with the introduction of three higher-spec versions to the line-up.

The 1.6 Clubman replaces the 1.6 in both Estate and Saloon forms. It has a sunroof and electronic radio/cassette.

LX models supercede the current 1.6 and 2.0 litre L cars. Electrically-operated front doors and sunroof, plus heated door mirror and trim changes are included at no increase in cost.

The SL is replaced by the SLX which has a more luxurious interior, external trim changes and an improved radio-cassette.

Price increases averaging 3.8 per cent were imposed on most Rover vehicles on May 1. Cars already held in stock by dealers should be available at the old prices.



## MP completes BAe programme

### David Young sees company

David Young, the Labour MP for Bolton South, is the second MP to complete an attachment with BAe. He is seen here being presented with his certificate from the chairman, Professor Roland Smith. Mr Young spent time at eight sites to gain an appreciation of the different aspects of the company's business as part of a Parliament/industry liaison scheme.



### 146 orders

The small four-engined 146 "Whispering Jet" has been ordered by Swiss airline Crossair, which will take four, and by LanChile, which has ordered one to join the pair it already operates. The airlines cited short-strip abilities, the safety margin given by four engines, low noise and comfort as reasons for their choice.

## No trouble for Hubble

The Hubble Space Telescope's roll-out solar "wings" are fully operational and providing the specified 5kW of electrical power to the spacecraft. Built by Space Systems, they are designed to last five years before replacement in orbit.

BAe also provided a very advanced light meter for the telescope.

Hubble was launched by the Space Shuttle Discovery on April 24 and will give us more information than ever before about the Universe.

## Son of Concorde a step nearer?

A Concorde successor is the real possibility following an announcement by BAe's commercial aircraft business and Aerospatiale of France on May 11.

The two companies have agreed to carry out preliminary studies into a second-generation supersonic airliner which could fly in the early years of next century.

The partners will also look at attracting wider international support which, as they

point out, will be necessary for the commercial success of a project of this size.

Early work will look at technical and environmental feasibility, as well as commercial viability. An investigative team will work for each of the manufacturers.

They will continue work already carried out by BAe on the AST (Advanced Supersonic Transport) and by Aerospatiale on their ATSF equivalent.

## Super 31 to help keep the peace

A Jetstream Super 31 is to be used to ferry senior United Nations officials around the Gulf region as part of the UN's peace-keeping role.

Zimex Aviation of Switzerland has taken delivery of a Jetstream Super 31 which will be painted in UN colours and flown under contract between cities such as the Iranian and Iraqi capitals of Tehran and Baghdad.

The plane will also trans-

port UN cargo, diplomatic mail and medical supplies to the regional UN observer centres.

### US jets delivered

The United States Air Force has received six C-29A flight inspection aircraft—military versions of the 125-800 corporate jet.

## Sports aid for youngsters

Eight top young sports people visited BAe's commercial aircraft HQ as part of the company's commitment to both the Sports Aid Foundation and the activities of young people in the community.

Company grants to the foundation help the eight, aged from 13 to 20, to develop their sporting talents.

BAe has sponsored the Sports Aid Foundation for the past four years and has just increased its support.