

# eCHO

THE NEWSLETTER OF THE CULHAM SCIENCE CENTRE & HARWELL BUSINESS CENTRE

July/August 2001

## Veterans reunite at

**V**eterans of D-Day gathered from across the UK to attend the annual service of remembrance at Harwell's RAF Memorial Stone. Local units of the Royal British Legion were joined by members of the RAF Guinea Pig Club - a national group of airmen who received two or more skin graft operations.

The service commemorated those who flew from RAF Harwell on the eve of D-Day, landing airborne troops behind enemy lines in Normandy by gliders towed by bomber aircraft.

Jack Perry, formerly employed at Harwell and now social secretary of the Guinea Pig Club, explained the club's celebration.

"At the end of the war there were 649 allied airmen who had undergone surgery,



Jack Perry, member of the 'Guinea Pigs' and Dr Terenghi at the RAF stone.

pioneered at the Blond McEndoe Centre in Sussex," he said. "We jokingly referred to ourselves as being 'guinea

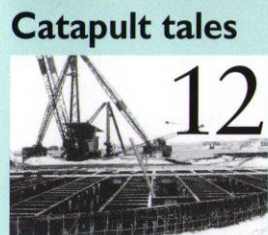
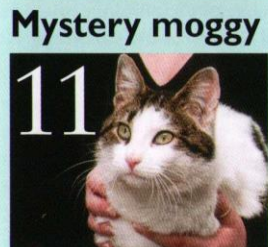
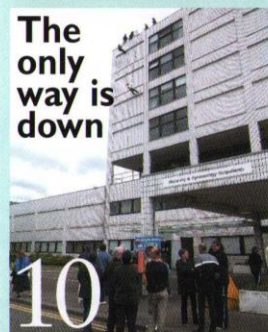
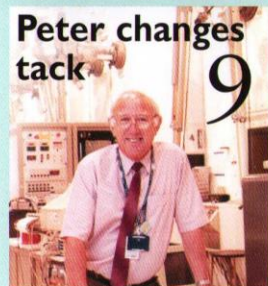
pigs' for testing these medical operations and a national club was formed. We celebrate 60 years as guinea pigs and members have come from all parts of the UK to be here today."

The club met for lunch and cut a celebration cake at the Harwell Royal British Legion clubhouse. They also witnessed the flypast of a Tiger Moth plane and heard a number of presentations including one by Dr Giorgio Terenghi from the Blond McIndoe Centre. Nick Hance, UKAEA's PR manager at Harwell, explained the history of the aircraft catapult system developed at RAF Harwell during the war.

Dr John Wilkins (left), Harwell head of site (UKAEA) and Dr Andrew Taylor (head of ISIS, RAL) both laid wreaths on behalf of the staff.



### This month





# Website analysis under scrutiny

**F**ollowing the sacking of a chief executive over inaccurate website figures, a leading expert in website visitor analysis has attacked investors' lack of understanding of e-business performance data.

John Woods of Site Intelligence, based at Harwell, believes detailed analysis of all website visitor information should be an integral part of the due diligence examinations of e-businesses.

He explained: "No investor researching a traditional

business would stake his reputation on one financial measure of performance alone, yet the number of page impressions or user sessions are often cited in isolation as a measure of e-business performance."

Equipped with expert statisticians and a management team experienced in mergers and acquisitions' assessments, Site Intelligence is well qualified to launch its new website visitor intelligence audits. These provide in-depth website visitor analysis for due diligence and management reporting, including visitor profiles, segmentation, conversion rates, navigation, return rates and other key business drivers.

Site Intelligence also offers a free white paper, 'A strategic overview of website visitor intelligence', as part of its drive to educate investors of the benefits of detailed website visitor analysis.

For more information about Site Intelligence or the white paper see the website at [www.site-intelligence.co.uk](http://www.site-intelligence.co.uk)



John Woods questions the accuracy of some website intelligence.

# Audio-visual open day

**I**mage Business Systems, the Harwell-based supplier of audio-visual and presentation equipment, is holding an audio-visual equipment technology open day. The event on Wednesday 18 July will be held in the Cockcroft Hall, from 10am to 6pm.

There will be a number of special events and free prize draws during the day. Visitors will be able to see the latest equipment including: Plasma screens with interactive overlays; Sanyo & Panasonic data/video projectors; the Epson "Billboard Vision" display system; Polyspan video conferencing equipment; Hitachi interactive whiteboards; Samsung visualisers and other leading edge products.

"The diversity and speed of new products coming to market makes it difficult for users to

keep pace with changes," says Andy Fegan, Image Business Systems MD. "We felt that a technology open day would give everyone the opportunity to see the latest products coming to market in a relaxed and informal atmosphere."

All Echo readers are welcome to attend the "Technology Open Day". To reserve your place please contact Image Business Systems on:

Free phone: **0800 316 6900**

Telephone: **01235 865500**

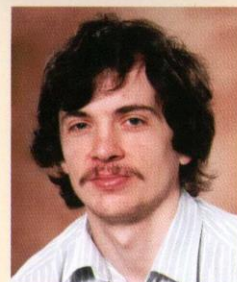
Facsimile: **01235 865511**

Email: **info@imagebusinesssystems.co.uk**

## Obituary

### Dr Brian Harvey

**D**r Brian Harvey, formerly of the Fusion theory and modelling department at Culham, died tragically on 1 April 2001 at the age of 37 after a long and dignified fight against illness.



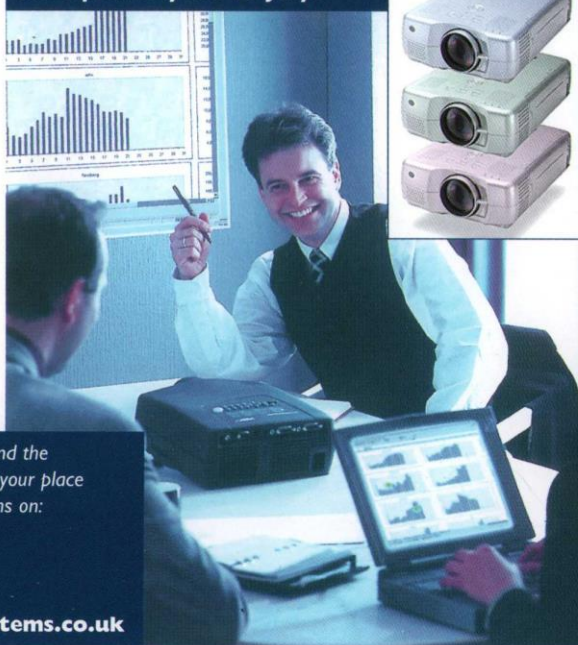
Born in Lanark (Scotland), Brian was quiet, unassuming, and exceptionally bright. He was affectionately known by his school friends as 'Brain'. After graduating with a PhD in plasma physics from the University of Glasgow and with three years' post-doctoral research experience from the University of St Andrews, Dr Harvey moved south to Culham Science Centre in 1991.

Fusion research fired Brian's imagination and he was particularly motivated by the possibilities both of abundant terrestrial power, and of applications to space travel. The key to fusion is to heat hydrogen gas to temperatures higher than the core of the sun, while holding the gas in place using magnetic fields. Brian applied his talents to addressing the fundamental physics issues that arise in this heating process.

He had, for example, considerable expertise in modelling and interpreting the important physical mechanisms by which radio waves, launched outside the hot gas, can be absorbed within it and thereby raise its temperature further. He was very effective as a physicist and he was popular with his colleagues, freely sharing his time and expertise with others.

Brian also made a valuable computational contribution to the theoretical understanding of plasma turbulence and fusion energy development in his final years at Culham before his illness tragically cut short a most promising scientific career. His cheerful whistling in the corridor, razor sharp independent mind, and keen sense of humour, all maintained through his long illness, will be very sorely missed by his former colleagues.

See the latest equipment at the open day on 18 July.





# SOLL

Leisure

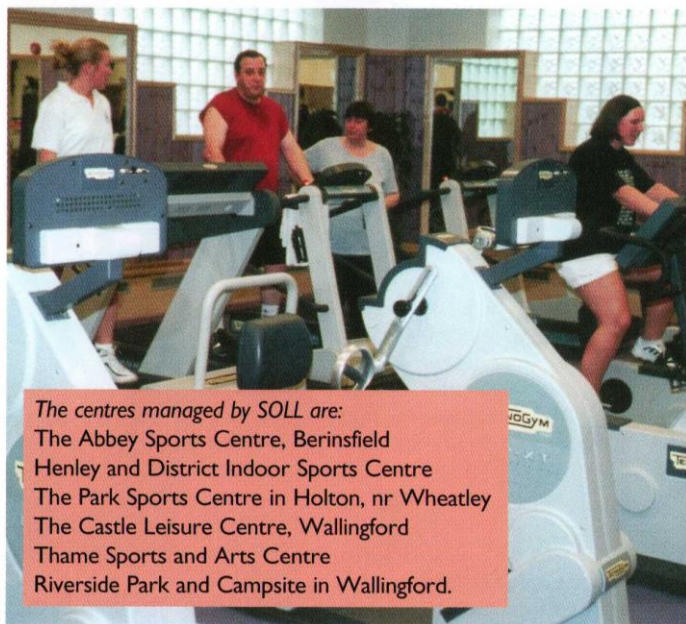
**T**he head office of a successful local leisure company has moved to Culham Science Centre. Located in C2, SOLL Leisure manages six facilities in South Oxfordshire, providing health, fitness, sport and fun for the local community. It is a charitable organisation employing over 200 staff.

"We are offering a mix of the traditional sporting activities including swimming, squash, children's holiday programmes and coaching as well as our new health, fitness and well-being package, called SOLLutions" says MD Stuart Henshaw. "We have noticed a huge growth in the fitness market and are able

## comes to Culham

to provide the facilities to meet the demand. Investment from local authority partners of over £1m in the last year will be added to over the next year with the £5m development of a new swimming pool and SOLLutions health suite at Thame.

"We are creating a fun and innovative company that is accessible, affordable and profitable," says Stuart. SOLL Leisure is just entering its third operational year and has seen its community use increase by 32%, to nearly half a million visits per year. Membership of fitness facilities have doubled and its staff numbers have increased by 30%. SOLL is now aiming to increase its facility base by gaining management contracts or developing stand-alone facilities.



The centres managed by SOLL are:  
The Abbey Sports Centre, Berinsfield  
Henley and District Indoor Sports Centre  
The Park Sports Centre in Holton, nr Wheatley  
The Castle Leisure Centre, Wallingford  
Thame Sports and Arts Centre  
Riverside Park and Campsite in Wallingford.

## Young entrepreneurs emerge

**A** team of young entrepreneurs from Bloxham School producing novelty clocks will go forward to represent Oxfordshire in the regional final.

The team, called 'Revolution', was judged the best young enterprise company in the county at the YE awards staged at Culham Science Centre in June. The difficult task of judging was undertaken by Dr Alan Street (managing director, Oxford Instruments), Cathy Forman (former head of investment writing, Gartmore Investment Management) and Christine Southall (schools adviser, Oxfordshire County Council).

By reaching the finals, each of the companies was already a winner, having succeeded in competitive heats. On the night, other awards were presented to:



Prize winners, Revolution from Bloxham School.

**STAR ENTERPRISE**, North Oxfordshire College, best team enterprise company

**IMAGYNE**, Our Lady's Convent School, Abingdon, Institute of Management award for manufacturing and Lloyds TSB private banking shield for the best presentation

**VORTEX**, The Oratory School, award for the best use of IT

**BLAZE**, Oxford College, Blackwell's cup for the best display stand and the challenge cup for the best use of marketing and market research

**REVOLUTION**, Bloxham School, UKAEA cup for the best financial report and W H Smith cup for the best company report

## liP achieved

**T**he Central Laboratory of the Research Councils (CLRC) which operates Rutherford Appleton Laboratory, has been recognised as an Investor in People. This national award sets standards for good working practice and for improving an organisation's performance through its staff.

"This award has only been achieved with the support of all staff and I'd like to personally thank everyone for their commitment to the scheme," comments chief executive, Professor John Wood. "Both Rutherford Appleton and Daresbury Laboratories have major new projects to look forward to over the next few years, and this award marks the beginning of a new era in collaborative science for us all.

"As an internationally acclaimed research establishment we rely heavily the experience and reputation of our staff. Working to the liP standard ensures that management provides an environment to develop and nurture them," he said.



# Awards for AEA Technology staff

A successful project to help Russia decommission redundant nuclear submarines from its Pacific fleet was just one of the initiatives that earned awards for AEA Technology staff. Chief executive, Peter Watson, presented the awards during the annual AEAT ceremony at Culham Science Centre.

In all 12 AEAT team leaders (seven from Harwell and Culham) received awards for invention, innovation, project management and customer satisfaction. Prizes for the leaders and their teams included certificates and vouchers for activities of their choice ranging from hang-gliding to a day at a health and beauty spa.

## Project management

David Field (Harwell) collected his award for helping the Japanese government supply a liquid radioactive waste treatment plant to

Russia as part of a major funding package to support decommissioning work. AEA Technology was appointed to this task in 1994 and the radioactive waste plant, which is mounted on a barge so that it can be taken to submarines that are unfit to be moved, was handed over to the Russian government in December 2000.

Justin Goodwin (Culham) was also presented with a project management award for leading a project to compile a UK Air Emissions Inventory to provide the Department of Environment, Transport and the Regions with up-to-date UK emissions data.

## Invention

David Raybone and James Shawcross (Culham) were presented with invention awards for their new Electrocat plasma system. While AEA Technology's original Electrocat removes particulates from diesel vehicles, the new system can remove both particulates and oxides of nitrogen from emissions from both diesel and some petrol engines.

Ruth Harper (Harwell) won her award for developing an improved process for the manufacture of printheads that are used to print items such as tickets and receipts. Ruth is developing an improved manufacturing method using micro-engineering techniques.

## Customer satisfaction

Bill Nixon (Harwell) was presented with his award for his work for the DETR. In the 1999 Budget the chancellor announced a Climate Change Levy, to be introduced in April 2001. For energy intensive industries agreements on reducing energy use were to be negotiated between the DETR and 10 industry sectors (steel, cement, paper etc). AEAT acted as technical experts and facilitators.

Philip Pain (Harwell) won his award for work to develop a Health, Safety and Environment (HSE) management system for Thai Shell Exploration and Production (TSEP). He worked long hours at the TSEP offices in Bangkok for 10 weeks and visited Thai oil fields in order to produce the 80-page HSE implementation guide on time.



Awards recognise successful teams within AEA Technology. Bill Nixon and Ruth Harper were unable to attend the awards ceremony.

## AEAT Nuclear Engineering sale

At the beginning of June it was announced that AEA Technology had agreed to sell its Nuclear Engineering business to NUKEM Nuclear Ltd, a member of the international TESSAG Group. The deal is subject to approval by the Nuclear Installations Inspectorate and also the German competition authorities, which are expected soon.

The principal activities of AEAT Nuclear Engineering are decommissioning, waste management, engineering design, project management and radiation safety services to the nuclear industry. For the year ended 31 March 2001, on an unaudited basis, Nuclear Engineering had a turnover of £43.8m and profit before tax of £2.3m.

The business employs more than 650 staff, with some 190 employees working at Harwell/Culham. Following the sale conditions of employment will be transferred.



# Insight

## Featuring companies at Harwell and Culham Innovation Centres

**D**anston Payne Ltd was formed in February 2001 by Mike Turner and Lorraine Olley and provides independent financial advice to companies and individuals from offices at Harwell Innovation Centre. Both directors together with administration manager, Debbie Purbrick, have worked together for nine years before forming Danston Payne.

"Most people could keep more of their money by following some basic rules" says Mike Turner. He believes that many people may be paying more than they need for debts such as mortgage and credit card borrowings.

"Often a meeting with a financial adviser, who looks at finances from an objective standpoint, can be the catalyst to organising finances more effectively and making sure that you have provided for the future, whatever that may hold."

Lorraine Olley specialises in corporate work. "New



**Danston Payne Ltd**

Lorraine Olley (left), Mike Turner and Debbie Purbrick.

companies often neglect things like shareholder agreements with potentially disastrous consequences, should one of the business principals die unexpectedly. A simple agreement can save a lot of problems and is easy to arrange," she says.

Danston Payne offers advice on all aspects of investment

including ISA's and pension planning to maximise available tax relief. The company also offers an independent mortgage advice service.

For further information or a no obligation appointment to discuss your finances call 01235 838599 or e-mail [info@danston-payne.co.uk](mailto:info@danston-payne.co.uk)

### Stop Press.....

Danston Payne announces a special offer open to all company directors/partners (under 50) at Harwell or Culham Innovation Centres. FREE shareholder/partner protection for 2 years. To protect your business free of charge call 01235 838599.

## Military survivors

**T**wo young managers from AEA Technology were put through their paces on a tough two-day course with the Reserve Forces. Colette Walmsley and Katie North attended 'Operation Executive Stretch' as part of the company's programme to develop exceptional managers for the future.

This annual event is organised by the South East Reserve Forces and the Royal Rifle Volunteers to train young managers while raising employers' awareness of the reserves. Around 120 professionals took part in the exercise that tests physical and mental stamina in pressure situations.

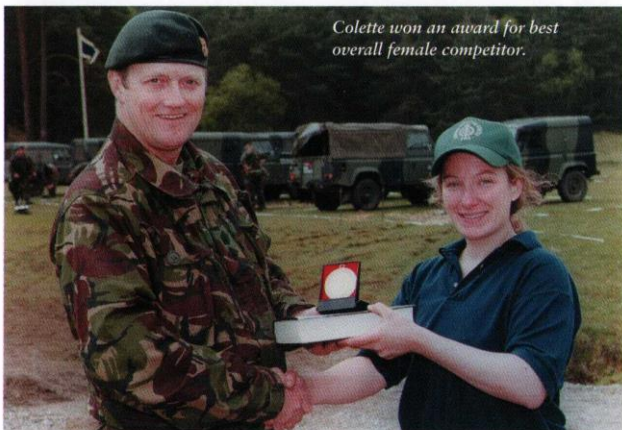
Colette and Katie are among a group of AEAT graduates completing a diploma in applied management at Warwick Business School and volunteered to take part to further develop their leadership and team building skills.

The weekend was a complete diversion from their normal activities. Their teams staged a fictional escape from war-torn Blagistan into friendly Camistan through simulated mine fields, while blindfolded, across water hazards, over military assault courses, through battle scenarios and rifle ranges, while treating soldiers with war wounds. They slept under the stars with basic ration packs for food.

Colette is employee communications manager based at Harwell and Katie an operations manager in a Culham department making radiation sensors. Both did well in the event. Their teams reached the final with Colette's team the eventual winners. Colette also won an additional award for best overall

female competitor.

Colette said, "It has been a fantastic experience, we had no idea what to expect but I have thoroughly enjoyed the weekend and have learnt a lot about my own skills as a leader and how to work as part of a team. I hope to use these skills in my professional life at AEA Technology."



Colette won an award for best overall female competitor.



Katie's team reached the final.



# Summer migrations



Chris Gregory and Scott Ball of Callaghan Demolition with the muddy puddle they have maintained to provide nesting material for house martins.

One of the wonders of the natural world is the annual bird migration to and from the UK. In spring birds from Scandinavia that have wintered here to escape the cold, can return home. In turn the UK plays host to large numbers of birds from central and southern Africa which arrive in April and May to breed as soon as their food supply of insects is on the wing. These birds will return to the same nest site year after year.

## Ridgeway ramblers

The route of an ancient and historic path was retraced by a local rambling club walking across the Harwell site.

The 'Friends of the Ridgeway' rambling club was led by Kate Crennell, a crystallographer and Chilton historian, and her husband, David, from Rutherford Appleton Laboratory. They passed along Straight Street, a former Roman road that crosses the Harwell International Business Centre from north to south, exiting near the DIDO reactor. It is known locally as 'The Golden Mile'

because it was used for sheep fairs and trading.

William of Orange marched northwards along the Golden Mile on his way to claim the crown of England in 1688. As he camped there with several thousand English and Dutch soldiers, he heard news of King James II's departure from London. William marched to the capital via Reading to be crowned King of England.



At the southern lagoon with Nick Hance (fourth left) and Angela Vincent (second right).

Harwell has at least six species of breeding summer migrant. There are several colonies of house martins, a pair of swallows near the reactors, chiffchaffs by the Hangar 9 lagoon and the former RAF housing site at Chilton field, willow warblers and blackcaps in the wood at Measehill and whitethroats in the farmland hedges. Swifts are often seen over Harwell, but do not breed.

Food, especially during a cold wet spring such as we had this year, and habitat are important factors. The Dido Road lagoon provides plenty of midge larvae for house martins and swallows, and the sheltered

conditions in wooded areas such as Measehill, have good supplies of insects. But without the right habitat these birds will not be able to breed.

Willow warblers need undergrowth at ground level, whitethroats a few feet higher. A supply of wet mud is essential for house martins and in this respect nothing is being left to chance this year. Staff from Callaghan Demolition involved in dismantling B161, have created a muddy puddle for four pairs of house martins building nests in the eaves of B149. Vic Stroud of AEA Technology health physics has advised on the correct consistency!

## Kids see 'Kewmobile'



Over 250 school children passed through the 'Kewmobile' to learn about the world of plants. UKAEA sponsored the project as part of its ongoing commitment to the environment. The Kew Gardens mobile exhibition, which explains about threatened environments and interesting plant species, is part of the Outreach Education Unit.

The Ridgeway ramblers walked along the same route, first pausing to view the Golden Mile inscription stone that stands outside the site between the Fermi Gate and MRC. Angela Vincent and Nick Hance of UKAEA corporate communications, walked with them to DIDO where John Buffery of UKAEA explained how reactors

at Harwell were being decommissioned. Nick explained UKAEA's ecological plan for the site, showing them the southern lagoon and B521 'Mound' areas.

Among the walkers was Rosemary Prior, an ex-member of Harwell's staff who remembered the reactor site well. She originally worked in B77 in 1946 and retired in 1985.



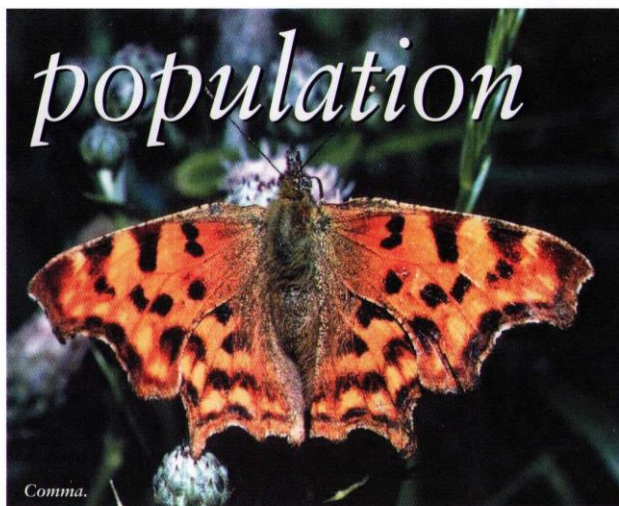
# Rich butterfly *population*

Article and photos by Chris Pickford,  
Harwell Scientifics Ltd (B551).

**T**he Downland areas around Harwell are home to many of the species of butterfly found in Britain. A good selection of these can be seen on the Harwell site itself, or on the north and south prefab sites. Each of the types of habitats we have on site support particular species, although some species range right across the site.



Orange tip.



Comma.

The new lagoon areas that have been planted may encourage new species not found here at the moment. However it is important to make sure that the plants and bushes that have been used are of the correct type, and that they provide the kind of protection from the wind that many species need.

Some species need a "micro-climate" that is best provided with south facing banks with vetches, etc, growing on them. It

is important that the foodplants used by some species are not cut down at the wrong time, and that widespread use of insecticides is discouraged.

Common species found on site include small, green veined and large white, orange tip, brimstone, peacock, small tortoiseshell, red admiral, comma, painted lady, meadow brown, gatekeeper, speckled wood, ringlet, small, large and Essex skippers, holly blue and common blues.

Less common here are small blue, green hairstreak (several large colonies), brown argus, small copper, marbled white, clouded yellow (especially last year!) and the odd migrant or unusual rarity.

Most butterflies are on the wing for a short time, and can only be seen for a few days or several weeks at most. The green hairstreak colonies here follow that pattern closely. Others such as the speckled wood or small white can be seen for much more of the year.

Some, such as the brimstone and small tortoiseshell, can be found flying on warm days for most of the year. Many of the more common butterflies such as the "vanessids" (red admiral, peacock etc) can be seen nectaring on the many buddleia bushes that have sprung up in warm corners around buildings.

*Butterfly Conservation* is a national organisation dedicated to preserving butterflies that carries out annual surveys of all species in the UK. There are a number of members here at Harwell, so if you see anything particularly interesting give me or another member a call on H4880.

## MYSTERIOUS TREE



**A**re there any horticultural experts who can identify this species of tree that has recently blossomed for the first time? Located close to Harwell's North Gate entrance the tree probably grew from seed and has reached a height of around 20 feet in four or five years. "It's a vigorous tree that originally looked like a rhubarb plant but now has a definite trunk," notes Steve Marriott of AEA Technology. "It has just flowered for the first time and has small mauve trumpet blossoms. There's another specimen on site near the old restaurant building that was struck by lightning in the autumn storms, so perhaps the seed came from that" he says. Any suggestions can be emailed to Valerie Judd, Echo editor, at: [vjpr@globalnet.co.uk](mailto:vjpr@globalnet.co.uk)



# Saving lives wins award for Phil

**C**urrent press advertising stresses how we can save a life by giving blood, but that's not all. Phil Hawkes, who works for AEA Technology in B220, has received a special award from the Blood Transfusion Service to recognise the fact that he has made 200 blood platelet donations.

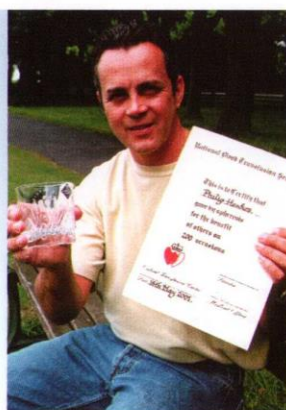
Blood platelets are especially valuable for serious medical problems such as leukaemia and cancer. Donations help patients recovering from powerful treatments. The demand for platelets is high because they can only be stored for five days.

Phil visits the apheresis centre at Oxford's John Radcliffe Hospital every fortnight and spends about an hour and a half donating sufficient platelets for two treat-

ments. Anyone between the ages of 17 and 60 who is healthy, and ideally weighs more than 10 stone, can donate. Normally your body will replace lost platelets in a day or so.

Blood is tissue typed for compatibility with recipients. Phil has the favoured 'O-negative' blood group that is a universal match, but most types are in demand.

He began donating blood in 1978 and was approached about becoming a platelet donor in



Phil would encourage anyone to consider platelet donations.

1994. Since then he has given 200 donations and was presented with a certificate and an Edinburgh crystal tumbler in recognition of his generosity.

Anyone who would like to consider becoming a blood platelet donor can call the donor unit at the JR Hospital on 01865 447939.

# West side clean-up

**H**arwell's Western Storage Area (WSA) is to be restored to modern environmental standards in an operation to remove chemical wastes from 25 disposal pits. Planning permission is being sought and work expected to start next year.

Some 25 small pits were used from the late 1960s until the '90s for the disposal of chemical wastes. Chemical solvents led to contamination of groundwaters under the site. A thorough investigation showed that the pits contain a wide range of chemicals, oil residues, broken glass and packaging. It has been decided to dig them up and backfill the pits with clean material.

The operation cannot remove pollution in the underlying chalk but will make it easier to remove it in the future. Meanwhile the groundwater containment plant prevents the spread of pollution. Additionally, other small areas of chemical contamination, redundant buildings and services will be removed.

Qualified and experienced contractors will carry out the work, which will be done by careful excavations in the open air. The wastes will be placed in sealed containers and disposed of by landfill or high temperature incineration at licensed facilities off-site. Extensive safety precautions will ensure the safety of staff working in adjacent buildings or members of the public using the nearby bridle-way.

Said UKAEA's Denise Varley, "The project will have a net positive environmental effect in the long term because chemical pollution will be removed and the wastes disposed of to facilities with better environmental protection."

Copies of a leaflet "Surface restoration of the Western Storage Area" can be obtained from Denise Varley by writing to her in B552 at Harwell or at [denise.varley@ukaea.org.uk](mailto:denise.varley@ukaea.org.uk).

# Raffle winner



**I**n return for its support for Sobell House Hospice, UKAEA received some free tickets to a charity concert. The performance was held at Dorchester Abbey and featured world leading tenor, James Bowman. The tickets were raffled and won by UKAEA's Gina Kaye, pictured here (right) with Angela Vincent who organised the raffle. Nearly £80 was raised through the raffle.

# Supper for Sobell

The UKAEA contract with JCI at Harwell ended on Saturday 31 March 2001. To mark the occasion a dinner dance was held at the Rutherford Restaurant, but it was far from a solemn event! A great time was had by all and only the drivers were left standing! With donated raffle prizes from incoming contractors Scion, ICE and ISS, a total of £500 was raised for Sobell House in Oxford. Many thanks to all those who attended and special thanks to the social committee - Janice Aram, Gail Stroud, Pam Floyd, June Tarrant, Russell Dulieu, Tim Anderson and Pete Johnsey - for all their time and hard work in organising such a successful event.



# A lifetime of work and discovery

**H**igh profile press reports about the ZETA project in the 1950s were enough to inspire a young school leaver in Cornwall to apply for a position at Harwell. Some 42 years later Peter Stanaway is about to retire and reflects back on a lifetime of work that can be catalogued through his own involvement in scientific advances.

Peter arrived in 1959 in the same 'intake' as Harwell PR manager, Nick Hance. Together with 30 or so others they undertook the SA (scientific assistant) training course in Hangar 8 that included essential skills such as glass-blowing.

Three months later Peter joined chemistry division, headed up by Lewis Roberts - later to become director of Harwell - and was involved in research work to irradiate organic chemicals. The unit was exploring a reactor system based on an organic coolant moderator. A couple of years later he came to work in B220 on fission product release from fuels - a procedure still carried out in the building today.

A change of direction took Peter to B429 where he was involved in studying the solubility of uranium dioxide at 'red heat' temperatures of 900 degrees centigrade as part of research into a molten salt reactor. Later he was to study the solubility of cobalt and manganese in sodium, again at temperatures up to 1000 degrees centigrade as part of the fast reactor systems.

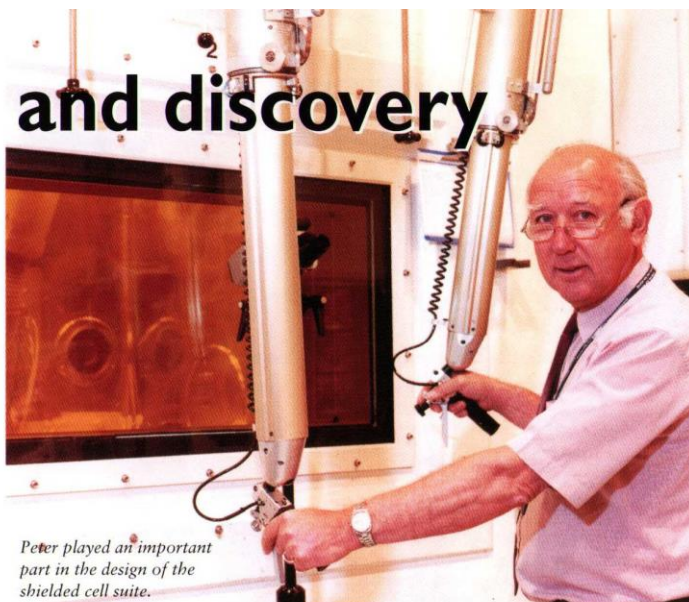
A milestone in his career

came when he presented his results at the Liquid Metal Conference attended by the world's scientific elite. Immediately after his address a group from India gave a paper on the same topic with virtually identical results.

"At times like that you feel proud to be part of a global jigsaw, piecing together the bigger picture with your individual contribution," comments Peter.

In 1982 he was fundamentally involved in the design of the shielded cell suite, B220.29. This revolutionary concept meant that each of the five cells - with walls measuring 4'6" and windows that were 3'6" in depth - could hold a complete fast reactor fuel element. Central to this innovative design was a removable modular container that could be taken out, decontaminated and re-used. With each box costing around £100,000 it made substantial savings and meant that cells could be used virtually non-stop without downtime for cleaning.

"I was able to give a practical insight from a user's point-of-view," he says. "Where the Americans and Germans had failed, we approached the



*Peter played an important part in the design of the shielded cell suite.*

drawing board from a fresh angle. I've learnt a lot about remote handling since then."

In his latter years Peter has worked as a safety manager, predominantly in B220. Indeed, he will continue in a part-time consultancy role following retirement.

Throughout his working life Peter has devoted leisure time to his passion for sailing. The pinnacle of his career came when he won the national

dinghy racing championship in the 1970s ... in a boat he had made himself! The 11 ft gull took about nine months to build. He has spent nearly 30 years as a Royal Yachting Association coach and is still a senior instructor.

Peter is winding down in style. His last working day will be spent on a team building exercise, sailing with UKAEA B220 colleagues, from Hamble to Cowes on the Isle of Wight.

## June's retirement thanks

June Luker recently retired from UKAEA and would like to thank everyone for their good wishes. She writes, "may I thank all my friends and colleagues across the whole of UKAEA at all sites for the wonderful contribution they made to my leaving present and for all their kind words. Also I'd like to say goodbye to all those who I was unable to see before I left and to wish everyone the very best for the future and to say I will always remember the wonderful send off given to me on 8 June 2001."

## Slips, trips and falls

**O**ur photo shows the latest safety promotion by UKAEA's HSED team. Entitled 'Slips, trips and falls', the display was staged at a number of locations at Harwell. It will be followed up by a series of presentations on this topic. Pictured are HSED members with B220 staff, from left, Sandy Forrest, Julia Reynolds, Alan Haresnape and Peter Fozzett.



## Didcot church fete

**S**t Peters Church fete takes place on Saturday 7 July at Newlands Avenue, Didcot. Open from 12noon to 4pm there will be many stalls, games and attractions including a bouncy castle, ball pit, refreshments and grand draw.

## SAFETY Update

**There has been one reportable incident at Harwell, and none at Culham, since the last issue of ECHO.**

At Harwell a contractor tripped on uneven ground and fell fracturing a wrist. The event was reported as a major injury under RIDDOR.



# Charity abseil adventure

**T**wo teams from Culham Science Centre were sponsored to abseil down the side of the seven-storey John Radcliffe Hospital in Headington, Oxford, in aid of funds for the Royal National Institute for the Blind.

The UKAEA Fusion team included Andy Cullen, Georgina Dawes, Jennifer Hay, Rachel Sixsmith and Robin Stafford-Allen. Joining them were the Sovereign Catering team of Sue Bateman, Jody Fry, Caroline Rebbetts and Katrina White.

As part of the preparations each person had harnesses fitted and received some basic training. They were then led off to the roof, where they had a nerve-racking wait before finally going over the edge about two hours after their scheduled "slot".

"Climbing the vertical ladder inside the building up on to the roof was scary enough, and then the long wait up there," said Sue Bateman. "By the time I got to the edge I was absolutely terrified - but I was determined to do it with all the sponsorship money for the RNIB riding on it. When I got to the bottom, I couldn't stand up - my legs had turned to jelly!"

Between them the two groups raised well over £1500 as part of the RNIB campaign to



Robin Stafford-Allen goes over the edge.

generate £25,000 for visually impaired children and adults, locally and nationally.



The Sovereign Catering team, from left, Katrina White, Caoline Rebbetts, Sue Bateman and Jody Fry.



Our photo shows Phil Whitaker (left) and Chris Smith by their cars - a Sierra Cosworth and a pre-war 1932 Austin 7.

**W**ith heavy penalties for overweight vehicles on the public highway, a weighbridge provides a quick and convenient way to double check HGV loads. Harwell has a weighbridge on site opposite B404 managed by ISS Servisystem. Site contractors can use the weighbridge at any time during normal office hours. They should call ISS on 01235 435840 to make arrangements.

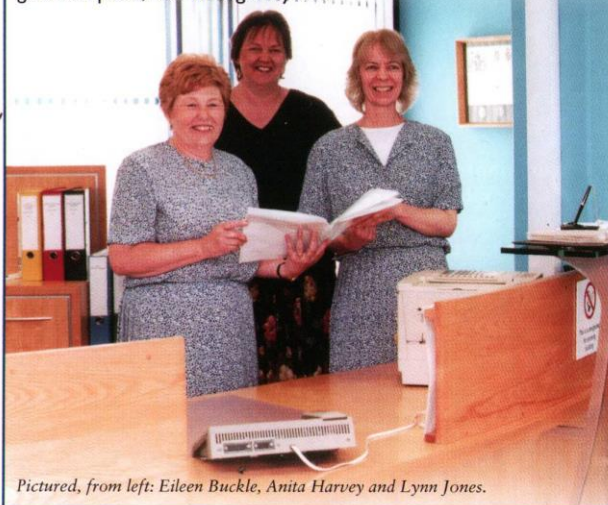
To raise awareness of the weighbridge ISS is running a competition for Echo readers. The company is offering £100 of Marks & Spencer vouchers to the person who comes closest to answering the following two questions:

1. The total weight of the Austin 7 in kilograms. Bear in mind that the car is loaded with a selection of cleaning products - contract cleaning is one of the main services provided by ISS.
2. The difference in acceleration time from 0-40mph between Chris Smith's Austin 7 and Phil Whitaker's Sierra Cosworth (it would have been 0-60 but the Austin's top speed is 45mph!)

Entries should be submitted before the closing date of 1 August 2001 to: Phil Whitaker, ISS Servisystem, B404, Harwell, by fax: 01235 436260, or by email: [iss@harwell.ukaea@issworld.com](mailto:iss@harwell.ukaea@issworld.com)

## New look reception

**F**rom mid-June the management of Marshall Building reception area (B521) was transferred to contractors ISS Servisystem Ltd. Reception staff, Eileen Buckle and Lynn Jones, have new uniforms reflecting ISS's corporate image, and in keeping with staff at the main gate reception, also managed by ISS.



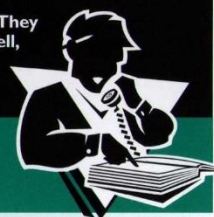
Pictured, from left: Eileen Buckle, Anita Harvey and Lynn Jones.



# eCHO

## exchange

Adverts on this page are free to all staff at Culham, Harwell, JET, MRC, Nirex, NRPB and RAL. Please submit your ad (30 words maximum) to the editor, Valerie Judd, by e-mail: [vjpr@globalnet.co.uk](mailto:vjpr@globalnet.co.uk) or by fax: 01865 331154. They can also be sent c/o Nick Hance, UKAEA, B521, Harwell, Didcot, Oxon OX11 0RA. For next copy deadline see back page.



All ads, apart from holiday accommodation, will be run for one month. Please resubmit any ads to be repeated. Telephone prefixes are: C Culham; H Harwell; JJET; M MRC; NI Nirex; N NRPB; and R Rutherford Appleton Laboratory.

### FOR SALE

### ACCOMMODATION

### HOLIDAY ACCOMMODATION

### MISCELLANEOUS

### MOTORS

## Moggy moves in

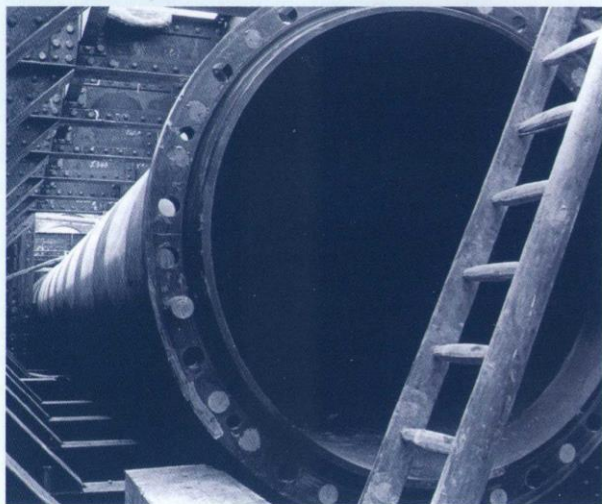
Scion Estates, the new FS contractor to UKAEA at Harwell, has moved into new premises in B353T and found a sitting tenant. A large female cat has been a regular visitor to the offices since the end of May. She is white with black and grey 'splodges' and green eyes. Pictured here is Lorraine Taylor of Scion who has befriended the cat. She says it is very friendly and relaxed with people and looks in good condition. "She is obviously a domesticated cat and may have strayed from a home nearby. I'm putting down water and food for her but would like to reunite her with her owners." If anyone recognises the cat they should contact Lorraine on H4746.





# Largest catapult restored

By Nick Hance



The pneumatic ram inside its trench

**UKAEA's task to restore the environment at Harwell involves excavating an unusual WWII feature. Buried for 50 years under the southern rugby pitch lies the RAF 'Catapult Pit' and work to empty its contents and refill with freshly quarried material starts this summer.**

Officially named by wartime RAE Farnborough scientists as 'The Harwell Mk III Catapult' it was the largest system for launching aircraft ever built in Britain. The earliest catapult system was the 1926 compressed-air system for launching spotter planes off the battleship HMS Hood.

Here a three-ton aeroplane was launched into the air over the rear turret, later to return by ditching into the sea from where the pilot was usually rescued.

By 1930 RAE had developed portable catapult systems for launching light bombers weighing eight tons. They used air at 400 psi (pounds per square inch). Wanting to launch even heavier bombers from short runways and also to get several aircraft airborne as quickly as possible, the scientists designed an entirely new system in 1935. Known as the hydrodynamic catapult, construction of an ambitious prototype started at RAF Harwell in late 1938. It

used a compressed air and hydraulic system to achieve 2000 psi and was designed to launch 30-ton bombers. Some believed it might work on the Rock of Gibraltar!

The Harwell catapult system had a major design fault in that its compressors rapidly wore out under the strain. Six Rolls-Royce 'Kestrel' aero-engines, running flat out, acted as motors driving six other engines modified as air compressors. Using a system of hydraulics and high-pressure air a massive ram rapidly opened in telescopic fashion along a trench. A quick-release hook, fastened to its end, hurtled along the ground for 90 metres dragging a specially strengthened aircraft with it.

The catapult system consisted of two launch rams in trenches set 60 degrees apart serviced by the compressor system mounted on a 30 metre-diameter turntable. The structure was encased in concrete and all that was visible were two narrow slots to take the catapult hook and the turntable roof flush with the ground. Although designed to launch aircraft in alternate directions with the minimum of delay, there is no evidence that any aircraft were actually launched. Development ceased at the end of the war and the compressor, turntable and rams



Construction of turntable roof section.

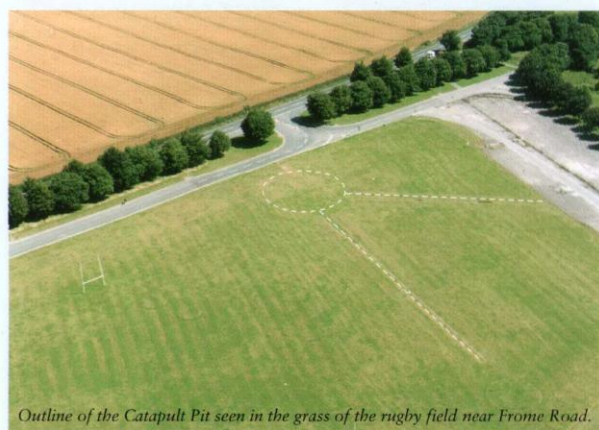
removed to Farnborough where they were incorporated in a smaller system.

Nuclear scientists took over RAF Harwell in January 1946 and utilised anything left by the RAF to further their research. The concrete-lined catapult pit, over three metres deep, became a transit store for uranium ore and other laboratory wastes. Staff living in the nearby Chilton pre-fabs petitioned Dr Cockcroft, the Harwell director, to have the pit turned into a swimming pool but in 1951 he decided to fill it in. There it remained until today, only visible in the summer months by the outline of dry grass growing over the concrete sections.

The excavation and refilling work will leave the concrete shell of the catapult structure intact and anything found of historical interest will be retrieved.



Catapult trench showing slot for travelling hook. Tracks for Avro Manchester bomber undercarriage are on either side. In the distance a Wellington bomber is landing.



Outline of the Catapult Pit seen in the grass of the rugby field near Frome Road.

THE COPY DEADLINE FOR THE NEXT ISSUE IS: Friday 17 August for publication on Wednesday 5 September 2001.



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