

Historical artefacts

Nick Hance, UKAEA's PR manager at Harwell, reports on recent donations for Harwell 'museum' from staff and retired staff from Harwell and Culham. A major trophy has been the recovery of the DIDO lifebelt.

The DIDO swimming pool reactor at Harwell was used jointly by the Admiralty and UKAEA in the 1960s and was finally decommissioned to a system field in 1994. Pictures of DIDO always showed a life belt on the operating bridge that reversed the length of the pool reactor. The life belt was donated to Bill Wood, the former research reactors division head, on his retirement. His son, David, now living in Harwell village, acquired the life belt when his father died and contacted Nick who collected it last month.

Two silver trophies have been found. One is the First Aid Cup, originally donated by Katherine Williams in 1955, the founder of Harwell's occupational health department. The other is the Inter-Departmental Football League Cup, dating back to 1948! Among the inscribed winners were Workshops (1948-49), Elec. X (1970-71) - activities now carried over by JCL, Fusion and RAL.

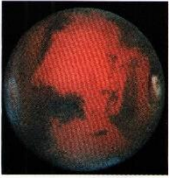
Said Nick, "I've had several 'phone calls from ex-staff who tell me that they would like their retirement object of art to become a permanent exhibit at Harwell."

Batteries power first Euro Mars mission

Scheduled for launch in June 2003, the first European mission to look for life on Mars will be powered by lightweight lithium-ion batteries supplied by AEA Technology.

The Mars Express mission will undertake the most thorough search yet for water on the 'red planet'. Scientific instruments provided by space research centres throughout Europe will make observations from the main spacecraft and other. The instruments will produce high-resolution images and mineralogical maps of the surface, radiol soundings of the subsurface down to the permafrost, analysis of the atmospheric composition and composition, and will also study the interaction of the atmosphere with the interplanetary medium.

As it enters Mars the spacecraft will release Mars full sphere craft Beagle 2, a free floating orbiter which Charles Darwin called 'the theory of evolution' - that will look for the signs of life.



The battery contract has been awarded by Malvern Spacecraft for the Mars Express spacecraft. AEA Technology's lithium-ion battery will support peak power periods when it is hidden from the sun and will support peak power demands which cannot be covered by the solar energy. At other times solar power will be used to operate the craft and recharge the batteries. AEA will also supply the illumination batteries to power Beagle 2.

found



Recovering the DIDO lifebelt and John Baffery, UKAEA DIDO decommissioning manager, and Nick Hance, PR manager for Harwell, standing on the site of the PLUTO reactor is seen in the distance.

We hope to display these in an exhibition in the DIDO reactor building in 2003."

He also has gifts returned by the nephew of R/V Dolphin CBE, former UKAEA chief engineer, who retired in 1959, which were made by the apprentices at Harwell and Worthville at Harwell and Worthville.

Anyone who has something of historical interest, please contact Nick on 01235 456909.

BEPO chimney bites the dust!

A's ECHO goes to press. Plans are being finalised for the demolition of the BEPO Fan House and chimney. The brick structure measures 56 metres in height and has been a landmark on the Harwell site for many decades. The contract for its demolition has now been agreed and work will shortly begin to systematically dismantle the disused chimney - no explosives will be used - for completion in spring 2000. A full report will appear in a future issue of ECHO.



ECHO 2000 PUBLICATION DATES

Why not pin on your noticeboard, or make a note of the copy deadlines in your 2000 diary.

ISSUE	COPY DEADLINE	PUBLISHED ON
FEBRUARY 2000	Mon 17 January	Wed 2 February
MARCH	Mon 21 February	Wed 8 March
APRIL	Mon 20 March	Wed 5 April
MAY	Mon 17 April	Wed 3 May
JUNE	Mon 22 May	Wed 7 June
JULY/AUG (12/00)	Mon 26 June	Wed 12 July
SEPTEMBER	Mon 21 August	Wed 6 September
OCTOBER	Mon 18 Sept	Wed 4 October
NOVEMBER	Mon 25 October	Wed 8 November
DEC/AN (12/00)	Mon 20 November	Wed 6 December

THE COPY DEADLINE FOR THE NEXT ISSUE IS Monday 17 January for publication on Wednesday 2 February 2000.



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Designed and produced by The Imaging Centre, Harwell.

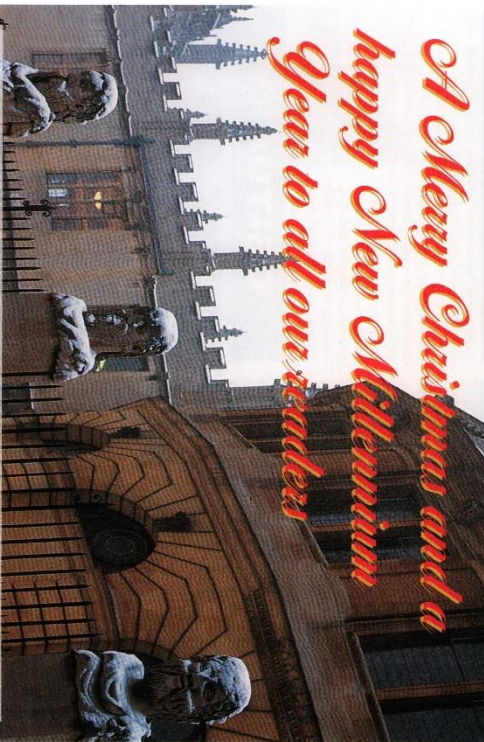


ECHO

THE NEWSLETTER OF THE CULHAM SCIENCE CENTRE & HARWELL BUSINESS CENTRE

DECEMBER 1999

A Merry Christmas and a happy New Millennium Year to all our readers



The last year has been exciting for the Harwell and Culham sites and we look forward to growth and prosperity in the new millennium. We congratulate Sir Walter Bodmer on becoming chairman of NRPB, Sir Anthony Cleaver on being appointed chairman of HRC and Dr Andrew Taylor at RAL, receiving the OBE.

We said farewell to Norman Taylor, Bryan Petre, Bernard Partridge, Isobel Radley and Dave Trooran - each giving more than 40 years' service. We also say farewell to Jean Jaquinoir and the JET Education team and welcome Jeremy Hurrell and his team who will manage JET's scientific programme and look forward to the successful migration of the JET facilities into UKAEA.

Technical milestones included the opening of the Harwell IIW Vault Store, the Battery Technology Centre at Culham, TOSCA at RAL and the start of operations at MAST. Culham's new spherical tokamak, Harwell Instrumentation and Harwell Scientists were launched. Reverse Alliance became the first official supplier of cruise scene DNA profiles. New radioactive discharge limits were sought for Harwell and plans announced for major environmental remediation work.

National Power established a centre at Harwell for its revolutionary electricity storage system and Ann Griffiths set up a complementary therapy clinic. AEAT formed several partnerships - one with Bancon's F1 racing team. Harwell Dossimeters changed buildings and seven Recycling received automotive awards from the FT.

To all at Culham and Harwell, to families, friends and neighbours, our best wishes for a happy Christmas and successful New Year."



John Williams
Head of Site, Culham



Derek Robinson
Head of Site, Culham

In this issue: 3 New technology helps heart patients 5 Blue Cross dog joins Harwell patrol
6 Massage in a battle 7 Compton to Cornwall 12 First Euro Mars mission

Finding a common purpose

Oxford Common Purpose held a successful Economy and Development Day on Wednesday 17 November at Culham. Hosted and sponsored by UKAEA, the event had a central theme to explore the strength of the region's economy. Delegates examined issues of competitiveness, regionalism and globalisation. Speakers included Barry Giles, director of enterprise development, South East England Development Agency and Andrew Dilnot, director, Institute of Fiscal Studies.

What is Common Purpose?

Common Purpose is an independent educational organisation which aims to improve the way towns and cities work. It delivers a unique educational programme for the rising gener-



Oxford Common Purpose delegates at Culham.

ation of decision-makers from all the different sectors in society: private, public, voluntary and community.

The programme concentrates on one central issue: housing, education, crime and justice, governance, planning and environment, arts, health or cultural diversity. The days include a

two-day residential course and is followed by nine intensive single programme days, one a month, each concentrating on one central issue: housing, education, crime and justice, governance, planning and environment, arts, health or cultural diversity. The days include a

variety of locations and annual guest speakers, behind-the-scenes briefings, workshops and answer sessions.

For more details about Common Purpose contact Karen Mackley on 01235 553264.

Compustaff arrives at Culham

A 13 name suggests, Compustaff is an IT recruitment consultancy. The company was formed in 1997 by MD, Simon Howcroft and has recently moved to new premises in C2 at Culham.

Speaking about the principal aims of the business, Simon Howcroft says, "An employer will tell you that IT recruitment is not easy, in Oxfordshire, it seems to be especially difficult. Having worked with many IT employers and seeing their frustration as they failed to attract the right people, I decided to set up a company to help them with an initial, severe and all-sorted search for which to work to the benefit of our customers. We are looking forward to the new millennium and our future at Culham with great anticipation."

Any organisation wishing to discuss their IT recruitment requirements should contact Simon Howcroft on 01865 409200 or email info@compustaff.co.uk. Compustaff also provides a free information sheet which has information about the company and a selection of current IT vacancies.



Simon Howcroft (second) with other members of the Compustaff team, Wayne Sabin and Paula Davies.

Simon Howcroft is also experienced in recruitment for non-client organisations, from clients who simply deal with their own internal agencies," he says. "We have extremely successful people in technology and, as part of this recruitment, we have chosen to move to Culham

OBTUARY

Dave Codling
1948-1999

Dave Codling was a well-liked and highly respected member of Culham division having made an enormous contribution both professionally and socially over 30 years.

He started work at UKAEA in 1969 as a contract electrician on the installation of the HERTX control room and other DT experiments. In 1971 he joined the UKAEA DT6 workshop and was promoted to electrical foreman in 1978 before moving to the JET workshop in EI.

He joined particle beam division in 1990 where he worked on the CADD project then moved to the RF group, Tokamak division. Dave rapidly became a vital part of the team completing the installation and operation of the large ZMW ECR/H/H microwave heating system to discuss their IT recruitment requirements should contact Simon Howcroft on 01865 409200 or email info@compustaff.co.uk. Compustaff also provides a free information sheet which has information about the company and a selection of current IT vacancies.



Dave always brought a sense of fun to everyday work, playing a major part in the charity fundraising escapades of the Culham All Pools Club for many years. He was a member of the Culham Rec. Soc. committee and was a driving force behind many events without taking the spotlight. Dave was a determined footballer and rugby player. His love of sport led him from the rough and tumble of the UKAEA 6-a-side tournaments to be one of the tournament members of the Drayton Golf Club.

He will be very much missed by his colleagues and friends at Culham and elsewhere and their sympathies go to Dave's family, especially to Joy and Alex.

New technology helps heart patients

An innovative new design of a miniature sealed radiation source by AEA Technology will enable cardiologists to offer better treatment to heart patients. The development was carried out for Novose Corporation, the leading company in prevention of restenosis - the re-narrowing of a previously treated artery.

Studies have shown that up to half the patients experience restenosis within six months of the initial operation to open blocked arteries. Metal implants known as stents are also routinely used to keep the coronary artery open, but restenosis still occurs in 20% to 30% of these patients.

Novose Corporation has developed the Beta-Cathys system for local delivery of beta radiation inside the coronary artery immediately following surgery to open up arteries and insert stents. Following a three-minute exposure to the beta radiation, the artery may be "frozen" in its expanded position, avoiding the need for additional procedures. Novose is actively marketing the Beta-Cathys system in several European countries, having received CE mark approval for the device in 1998.

AEA Technology, a world leader in the production of sealed sources, has developed a 5x20 source so small that it will enable the use of smaller diameter catheters allowing access to the smallest of coronary arteries.



The tiny device will have a major impact within the field in the USA where over 600,000 patients need in-catheter angioplasty.

Subsea recovery

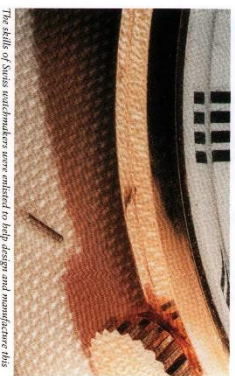
Up to 1.5 million tonnes of drill cuttings may be trapped beneath oil and gas platforms in the North Sea. They are produced when drills cut through subterranean rock to reach oil and gas reservoirs. When the platforms are decommissioned the cuttings could be dispersed and pose an environmental hazard. Offshore operators expect to spend around £50m a year dealing with drill cutting piles from 2001.

As part of the industry-wide search for a solution, AEA Technology has developed the design for a cuttings recovery vehicle. The robot is capable of working in harsh seabed conditions and will pump cuttings back to the platform where excess water is removed and cleaned before being returned to the sea. The cuttings are lifted before being re-registered into the strata.

The robot is operated via computers on the platform with a remotely operated vehicle working alongside to assist. The recovery vehicle has a telescopic boom attachment that will reach under the platform and pump out the drill cuttings.

Gary Phillips of AEAT said, "There is a huge market in the North Sea for any company that solves the problem posed by drill cuttings. We have developed the design for a complete system that will re-ject the cuttings back into wells and protect the reservoir engineering consistency. We are now looking for a major partner to help us bring this system to market."

AEA Technology half year results	
Sales	£171.3m
% Increase on 1998	3%
Operating profit	£12.4m
% Increase on 1998	15%



The skills of Novose and AEA Technology were combined to help design and manufacture this miniature radiation source, patented here based in a novel design.

This offers a viable treatment to an even greater range of patients. As a result of the successful development and prototype production of miniature sealed sources for clinical trials, AEA Technology and Novose have signed a development and manufacturing agreement. Novose is investing in a major automated production facility at Braunschweig, Germany, that will supply Novose's anticipated requirements for the smaller sources for the next five years.

vehicle



The vehicle is designed to reach the base of platforms of the North Sea.

AEA Technology has been awarded a £1.5m contract extension by the DTI to improve oil recovery. The company will independently advise government on the most effective use of North Sea oil and gas reserves, ensuring that field developments meet good oil field practice and are in the national interest. AEAT provides reservoir engineering consistency, computer modelling of oil fields and laboratory measurements to a variety of customers.

DTI contract

Festival of Science and Innovation

21 January - 4 February 2000



In January the Oxford Trust will be running its ninth annual Festival of Science and Innovation in Oxfordshire. Evening events will include Dr Neil Johnson - presenter of this year's Royal Institution Christmas lecture - giving the Science Centre's first ever 'Open House' lecture on the topic of 'Predicting the Unpredictable' and Dr Peter Kofoid tracing the history of artificial development of artificial limbs in From Captain Hook to Reebop.

There will also be a Festival Forum looking at GPOs (generally modified organisms), chaired by Judith Hunt, with contributions from Sr Valerie Bodmer, Professor Christopher Baines and Dr Brian Hargrave. Baines and Hargrave's community will include the Innovation Lecturer by Professor Jay, the children who will be talking about future developments in the world of mobile communications. For families there will be a day of workshops, shows and performances on the theme of Circus, Stars, Life and Play, and a wide range of activities at a local shopping centre.

The Festival has been selected as the best of its kind in the country in 2000. There will further events in West Oxfordshire in March, South Oxfordshire in July and North Oxfordshire in November. For further details of the festival programme and booking information contact Alison Hendry on 01865 728953 or e-mail: alison@oxontrust.org.uk

BNES lecture

The next BNES Centenary Branch talk will be presented by Eric Hawford (AEA, Technology) and Howard Broadbent (FOD) on the 19th January, in the ETSU lecture room, B153, Harwell at 5.30 pm for 6.00 pm. The talk will discuss the decommissioning of the JASON reactor at Greenwich Energywork reactor.

'The Hunchback of Notre Dame'

Oxidehite's 'Trang' Theatre is presenting the production 'The Hunchback of Notre Dame' on Tuesday 12th December, in Harwell village hall. Tickets are £5 (pupils/concessions available) from Martin Rides on 04564 or White Horse newspaper High Street, Harwell.

Local councillors briefed at Harwell

Members of West Berks Council visited Harwell last month. Oxford City Council member committee visited the Vault Store and West Berks Council toured the radiolab-facility (B220).

West Berks Council, based at Neotoma, were invited by Sean Gardner, director of UKAEA's Southern Division. As well as discussing the chemical event that occurred in September the council heard about environmental restoration works and site development plans for Harwell into the next century.

Seventeen members of Oxford City Council toured Harwell's Vault Store and



Members of Oxford City Council monitoring comments at the Vault Store.



Bob Williamson (AEAT, right) explains the chemical event to West Berks Council.

enjoyed the hands-on experience of operating manipulators used to repack radioactive waste. Later they toured the partially decommissioned D1D0 reactor.

At the event Iain Watson, Committee (LCO), held on 26 November, John Wilkins, UKAEA's head of site, invited 40 local councillors and other local representatives on optical bases. He described the chemical event that arose from a possibility that an operation could have formed an aqueous chemical solution during 9-10

ABC lifestyle study at Churchill

The breast cancer research programme, funded by Cancer Research UK, based charity, ABC is being expanded. The ABC diet and lifestyle study forms part of a large programme of research based at University College London, which will establish a second research centre at the Churchill Hospital in Headington, Oxford.

Diet is thought to be significant in cancer prevention and can influence on how likely a cancer is to spread. The overall aim of the ABC study is to investigate the relationship between diet, nutritional and metabolic characteristics, lifestyle factors and survival from breast cancer.

Environmental factors have been shown to be important, for instance, when migrants move from one country to another they reflect the host country's incidence of breast cancer within several generations. Migrants moving from Japan, where incidence rates of breast cancer

Questionnaire data is collected on diet, physical activity, reproductive history, alcohol and tobacco consumption, previous medication, anxiety levels and have, upon setting in the UK, are less than half those in the UK. Incidence rates within two or three generations.

The ABC diet and lifestyle study is particularly interested in phytoestrogens, a family of plant compounds which may confer health benefits related to cardiovascular diseases, cancer, osteoporosis and menopausal symptoms.

For the ABC study women with invasive primary breast cancer are recruited after primary treatment has been completed and are followed up for a five-year period.

Cardiff and Belfast.

Blue Cross dog joins Harwell patrol

Raffy, a two-year-old German Shepherd dog, has joined the team of canine companions who, together with their UKAEA Constabulary handlers, are responsible for patrolling the Harwell site. Not long ago she was one of the many dogs waiting for a new home at the Blue Cross animal sanctuary at Bedford, west Oxfordshire.

"Raffy" was assessed to determine whether she had the right temperament to work as a patrol dog, explains her handler, PC Michaela Richardson. "She gave all the right signs and we embarked on our training together."

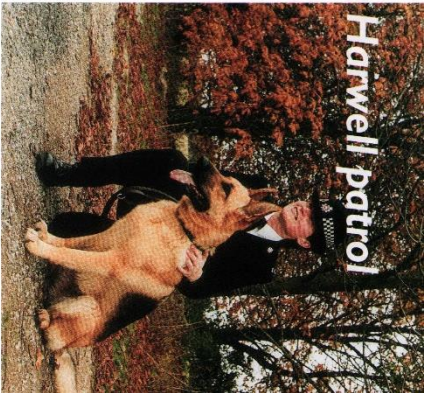
Michaela joined the constabulary in 1997 and when the position of dog handler arose she decided that it was a challenge she wanted to take. Trained up with her new partner Raffy an intensive six-week training course was undertaken at the Force Dog Training Centre, Seelby.

Michaela and Raffy work shifts as part of a team of police dog handlers to cover the Harwell site 24 hours a day. The dog handlers are quite distinct from the 'nuclear' security guards with their kevlar vests

straining of the leash.

"Our dogs are very user-friendly and we pay a very proactive role, patrolling the site continuously as part of the patrolling requirement," says Michaela. "However, the dogs are trained to carry out all the usual police duties such as tracking and deterring intruders and even though they very seldom have to put these skills into practice the dogs are more than capable of fulfilling these requirements."

With their highly developed sense of smell dogs play a vital role in police work. They could, for example, enter a storage room and indicate a foreign object which does not belong there or track down an individual from the witness seen which remains in their wake. Although dogs have poor long distance



Working partnership, Michaela Richardson and Raffy.

'Shop-window' removed

Large glove boxes, known as 'shop-windows', marked the completion of decommissioning work in Harwell's B220 radiochemical facility costing £20 million.

This milestone was achieved when UKAEA building manager, Colin Lyon, walked into the previously radioactive area without the need for protective clothing. Colin remarked afterwards, "Now downgraded as a free-breathing area, I walked through places that entered 15 years ago - at that time wearing a pressurised suit!"

The shop-windows, essentially floor-to-ceiling fixed glove boxes designed to handle alpha active materials, such as americium and plutonium, formed part of B220's Alpha Wing. Originally built in 1949, they were decommissioned and removed this year, as part of a ten-year long decommissioning programme that started in 1989. This

programme resulted from a review of business prospects that concluded commercial work should be consolidated in other parts of B220.

The £20 million decommissioning project also involved the removal of about 170 of the original 240 free-standing glove boxes, mostly using a robot, as well as a number of laboratories. Last to be completed were the shop-windows which included an area accessible only by pressurised suit workers.

In parallel with the decommissioning work was a programme of refurbishment costing a further £10 million. This included improving the ventilation system, rewiring and fire prevention work. As a result, parts of the original Alpha Wing have been re-instated as non-active laboratories and new offices.

Much of the decommissioning work has been carried out by AEA Technology and Rolls Royce Nuclear Engineering Services Ltd.

Commuter survey winner

Nearly 300 readers filled in the commuter questionnaire included in the October issue of ECHO and Gilly O'Leary from Leeds University's Traffic Studies Department has begun to analyse the results. She would like to thank everyone who took part. About a third of the entries were accompanied by names and addresses and were entered into a draw.

The winner of the £25 Smiths Gift Voucher was Dave Baker of AEAT Nuclear Engineering in B35128 at Harwell. We intend to publish the main findings of the survey in a future issue of ECHO.

Massage in a battle – sports and physical therapy by John Hill

Many aspects of the ageing process are quite avoidable, without great expense or effort. Much of the physical frailty to which we all seem to succumb is entirely down to mismanagement of our bodies rather than the decline of any intrinsic health or strength. It is not necessary to indulge in endless exercise programmes, although they have their place.

Eight out of ten of us will suffer from back pain at some stage. Guidelines issued by the Royal College of General Practitioners (RCGP) in 1996 stated that people reporting with back ache should be advised not to rest, but to stay fit and work if possible, but to stop age correction and manipulation in the interim. It is surprising to challenge the good practice of those GPs on whom we rely for advice, all our primary health care, and so on, who would certainly not consider themselves as athletes and some public, should know to advise them to be more responsible for their own health.



John Hill, physical therapist, has much to offer the desk-bound worker.

The first challenge of physical therapy is convincing people to take the step. The office worker or driver, for example. The most precious function of our skeletal body is flexibility. Without good range of movement, muscle use is going to be restricted and mobility will suffer. The best way of developing restriction in joint movement is to keep the muscles around the point in tension without letting them move.

The two main sites where this happens most is at the neck and shoulders and at the base of the spine. In each of these places, the postural muscles are supporting considerable weight but are not moving. They will minor injuries with respect. Don't ignore them and don't think that once the pain has gone, so has the problem.

John Hill is a qualified Sports Therapist and Personal Trainer and lectures in Sports Massage at Abingdon College. He delivers treatments to clients homes and to clubs and organisations by arrangement. He also runs a clinic at A Touch of Health on the Harwell International Business Centre on Fridays, 01235 816596. Initial consultations and all pre-treatment assessments are free of charge.

Korean delegation

A delegation from the Korean government and KBSI (Korean Basic Science Institute) visited Cuhnam recently. They were particularly interested in training young scientists to work on their new fusion project KSTAR. The Korean visitors pictured here are Dr Young-Bok Chae, Dr Jung-Soon Lee, Mr Eun-Chul Choi, Mr Inho Gim, Mr Lee-Hwan Kim and Mr Jung-Hoon Han inside the COMPASS experiment with Garry Voss, Alan Sykes, Richard Buttery and director of fusion, Dr Derek Robinson.



Health & Safety first



Adult learners, safety advisors in pictorial discussion manual handling issues with members of staff from BS21, Neoca Smith, Vain Harvey, Stuart Jolly and Jane Lister. The UKAEA safety and environment department (HESD) at Harwell provides annual handling safety campaigns, engaging organisations across the site. As prevention is always better than cure the campaign advised that do not have to avoid lifting, but do not do it in a way that could be redesigned or a workpiece designed to avoid lifting, this should be investigated. Where lifting is essential, then a risk assessment should be carried out, and the correct lifting technique, the load, working environment and individual capabilities. For more information please call the Safetyline on ext 177.

Compton to Cornwall on two wheels

Terry Hacker of MRC recounts his 280-mile charity cycle ride

Returning to work I can look back with a sense of achievement, but must confess that those two days were the most gruelling I have ever had.

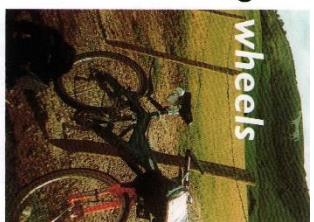


Day two, approaching Okhampton, 179 miles down, 110 to go. The strain is beginning to tell.

On Friday 24 September, I awoke at 4.30am to the sound of torrential rain and howling winds. The rain came, went and came back again over the next two days leaving many minor roads flooded, but the main problem was the strong and persistent wind (and getting lost on a few occasions). By Friday evening, I was some 20 miles short of my possible overnight stop and found myself in the middle of nowhere, cold, wet and it was very dark, but I managed to find a B&KB for the night.

Saturday morning started wet and windy again but soon improved and roads were flat. It was not until I encountered hills past Crediton that I realised that I was very 'saddle sore'. This proved to be a big problem with hill-Deson and Cornwall, and the final stretch down the A30 from Okhampton was horrendous. I had to walk or stand and cycle on some of the hills as it was too painful to sit. This took its toll on my Achilles tendon and I felt it 'pop' which, combined with an increasingly strong head wind, torrential rain and spray, made the last 70 miles extremely hard going. To make matters worse my bike computer and telephone packed-up due to the wet. Stopped to help two motorists, one lost, the other broken down.

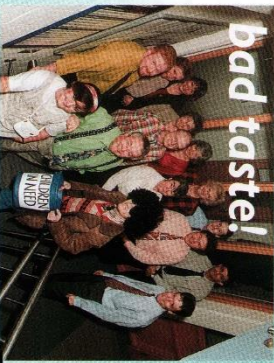
I finally arrived at St Agnes at 9pm, some 38 hours and 280 miles later, wet, cold and sore but in time for a drink, a bath and March of the Day! I would like to thank all those who sponsored me and have contributed towards the total of between £450 and £500 for the Anthony Nolan Trust.



Day one at Westbury, with the White Horse in the distance, it's miles gone and feeling good.

Groovy

Staff from AEAT Finance Ltd, Harwell, visited Cuhnam recently. They were particularly interested in training young scientists to work on their new fusion project KSTAR. The UKAEA safety and environment department (HESD) at Harwell provides annual handling safety campaigns, engaging organisations across the site. As prevention is always better than cure the campaign advised that do not have to avoid lifting, but do not do it in a way that could be redesigned or a workpiece designed to avoid lifting, this should be investigated. Where lifting is essential, then a risk assessment should be carried out, and the correct lifting technique, the load, working environment and individual capabilities. For more information please call the Safetyline on ext 177.



Cuban charity cycle ride

Another Harwell staff member team to jump into the saddle for a good cause is Fiona Dibley. A native UKAEA contractor manager. She will be leading her endurance to the front by cycling 350km on and off road over the days in Cuba in aid of the National Deaf Children's Society.



Fiona Dibley, contractor manager at UKAEA, is also experienced at the Cuba Charity challenge.

From Friday, 24 September, I awoke at 4.30am to the sound of torrential rain and howling winds. The rain came, went and came back again over the next two days leaving many minor roads flooded, but the main problem was the strong and persistent wind (and getting lost on a few occasions). By Friday evening, I was some 20 miles short of my possible overnight stop and found myself in the middle of nowhere, cold, wet and it was very dark, but I managed to find a B&KB for the night.

At this time of year we would usually send you our seasonal greetings but this year we have decided to do something different and will be donating cash to UNICEF rather than spending money on Christmas cards.

UNICEF is the United Nations' children's fund. It works in order to protect better health and provide education. Being a science and engineering business we are UNICEF's technology partner. We are aware that children living in the poorest parts of the world have clean water and sanitation. The work we do and we hope you will agree with our decision. May we wish you and your family a very happy Christmas and a healthy and prosperous millennium ahead on.

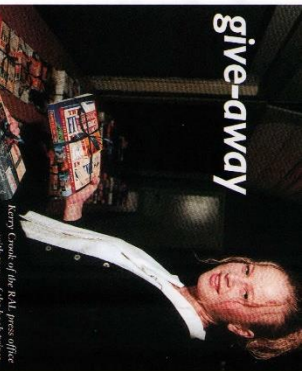
With our very best wishes.

£1,000 science book

Over 100 books with a value of £1000 were given to students from 40 schools, including four special schools, in Oxfordshire, Berkshire and Hampshire. They were the prizes awarded by RAL to the 14 year old student in each school nominated by their science teacher as having shown the most effort and enthusiasm in science during the year.

"It is not necessarily the best science student who wins the prize, but the one who has achieved the most", explains Janet Hallett, schools liaison officer at RAL, who organised the event. "This year we were delighted to include winners from four special schools".

RAL chief executive, Bert Westwood presented the books which had been chosen by the students. The topics of the books reflect the diversity of



give-away

hour discovering new stars, vitamins undertake cell repair, they were able to learn how lasers are used to study a wide range of problems such as how

science - UFOs, the Big Bang, special effects in film and TV and the search for life on other planets as well as some useful encyclopaedias and course books.

The winners and their teachers were able to see some of the leading edge scientific research facilities at RAL during the afternoon. The students were introduced to some of the mysteries of space science research and given a short talk

Sixth formers teach younger pupils



A novel scheme designed to inspire sixth form science students and encourage them to help teach science to lower school pupils was developed at a recent meeting in France with the Particle Physics and Astronomy Research Council (PPARC) and St Augustine's Canterbury upper school in Oxford for a weekend of lectures and practical workshops on the wonders of particle physics.

Following the intensive weekend course held at The Casanov's House in Abingdon, the sixth formers will develop a resource package which will, in turn, be presented to lower school students under the supervision of teachers and RAL staff. They will later be encouraged to take these resources out to other schools.

Lectures on particles and how they are detected, and the birth of stars and planets, were the starting points for web-based activities undertaken by the students who compiled their own web pages.

The scheme was the brain-child of Dr Mike Seymour and a group of particle physicists at RAL, working with Alison Matthews and the physics teachers at the school, with funding from PPARC.

NRPIP First report

The first report of the NRPIP Ionising Radiation Incident Database (IRID) has just been published. Launched in 1996, the database acts as a national focus on ionising radiation incidents, primarily in the non-nuclear sector i.e. industry, research, teaching and medicine.

The report provides the first coherent review of incidents on the database, which currently total 100. The information is anonymous and the 'case studies' have been formulated to make them easy to use as training material. To help readers find incidents pertinent to their field case studies are grouped under headings such as unsealed radioactive materials, industrial process failures, recycling and scrap metal, X and gamma irradiation, use and servicing of X-ray equipment and nuclear density gauges.

Initial analysis of IRID shows the most frequently occurring themes and lessons to be learnt. The report should be of interest to a number of different audiences and is on sale for £15 from NRPIP information office at NRPIP, Chilton, Didcot, Oxon OX11 0RQ, tel: 01235 822742, fax: 01235 822746, email: information@nrpip.org.uk

Twinning tour

Visitors from Meulan, Didcot's twinned town near Grenoble in France, toured RAL last month. They were welcomed by John Tomkinson, a senior scientist working on the world-leading lab facility who also conducted the tour in fluent French, learnt during five years in France. He explained how his team is fluent French, learnt during five years in France. He explained how his team is fluent French, learnt during five years in France. He explained how his team is fluent French, learnt during five years in France.



The party also heard about the Laboratory's space mission work from RAL's Jeremy Cates (second left) with Dr Mike Seymour (left), George Tomkinson (left), Tom Baker (standing), Michael, Richard (standing), Michael, Roger (child), (standing), Michael, and Amanda (sister of the Madams).

End of an era

After 43 years as the headquarters of the Recreational Association, the Harwell Social Club (HSC) is to close on 31 March 2000. As an FCOH on 22 September 1999 a decision was made to close the club on 31 March 2000. The social club will remain open as an activities centre for affiliated clubs and individual members during the period January - March 2000, but no refreshments will be available. As a result of the closure of bar and catering services, all social club staff will become redundant on Christmas Eve.

As the rec. soc. has no pension scheme staff will receive statutory redundancy payments. It has been decided to initiate a staff redundancy fund to enable individual members and affiliated clubs to show their appreciation for the services provided on their behalf over the years. Any members wishing to contribute should make cheques payable to: HLEA (staff) and forward them to the association secretary, B161, Harwell. Alternatively, collection boxes are situated in the social club bars for members' convenience.

In recent years the rec. soc. has gone through financially turbulent times due, in the main, to a reduction in membership from a diminishing site workforce. The committee hopes that members will, despite a reduction in numbers, direct, continue to support the association during a second financial year for 2000 and beyond.

Membership and other rec. soc. matters will continue to be handled by the HLEA office, B161 until further notice. First results will be known shortly. The Spring Championship, Harwell, will again be played at lunchtime with kick-off at 12:45 if you're interested in entering a team, please telephone our team list (between 8 and 12 o'clock) or e-mail us on: championship@harwellstaff.com.

Members are invited to the AGM on Wednesday 19 January 2000 at 12:30pm in the Harwell Social Club. Nomination forms for positions on the Harwell Social Club are available from the association secretary, B161, Harwell or call H296. Proposals for candidates for the AGM should be submitted in writing (and recorded) to the association secretary no later than Wednesday 5 January 2000. Decisions will be taken at the AGM which will shape the future of the rec. soc. Members are therefore urged to make every effort to attend. Use your vote - support your association!

A 2-hour wind these members of the Harwell Association's annual fireworks show, but dropped with an hour to go, allowing the event to go ahead as planned. About 3,000 people enjoyed a fine and dry evening watching a spectacular show of fireworks that cost £200 to stage. The children visited the Social Club for refreshments and to take part in an evening's entertainment including a magic and children's disco. The budget collection raised £1200.



AGM

The HLEA annual general meeting will be held on Wednesday 19 January 2000 at 12:30pm in the Harwell Social Club. Nomination forms for positions on the Harwell Social Club are available from the association secretary, B161, Harwell or call H296. Proposals for candidates for the AGM should be submitted in writing (and recorded) to the association secretary no later than Wednesday 5 January 2000. Decisions will be taken at the AGM which will shape the future of the rec. soc. Members are therefore urged to make every effort to attend. Use your vote - support your association!

Fireworks spectacular

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Celebrate Christmas at Café Ridgeway

Christmas lunch will be served at Café Ridgeway (B455) at Harwell on 20th, 21st and 22nd December between 12 and 2pm. Please pre-book tables with a £1 deposit per person (refundable with 48 hours notice of cancellation) as numbers are restricted to 40 per day. Two courses £5.75, three courses £6.95. Please ring Dawn on H2598 or fax H2816 for your booking form.

Don't miss the post!

The last posting dates for Christmas 1999 are:
First Class - 21/11/1999
Second Class - 18/1/1999
Parcels - 16/1/1999
Europe - 13/1/1999

Harwell staff using couriers should phone the numbers shown below for Christmas collection/delivery details:
 Despatch/Import/Export: H4108/4102
 Post Room: H5880/5732/4452

Christmas at Culham

Normal services will apply at Culham up to and including Thursday 23 December. The Christmas Eve service will be held on Friday 24 December and the Christmas Eve service on Saturday 25 December. A special service in the Culham church will be held on Thursday 16 December.

Millennium calendar

Harwell village millennium committee's year 2000 calendar is available from market@labcuk.RS454.com. It costs £5 with all proceeds to the millennium committee for millennium year events and village projects.

6-a-side league table at 19 November 1999

League Position	Team	W	D	L	Pts	For	Against	Points
1	Harwell	3	3	0	15	3	6	6
2	Cherry	3	3	0	15	1	4	4
3	Rolls and Kites	3	3	0	15	7	3	4
4	6-a-Dub	3	1	1	10	6	3	3
5	3-a-Hoop	3	1	1	10	4	3	3
6	Bliss	3	1	0	9	4	2	2
7	7-a	3	0	0	9	1	14	0
8	1-a-Viper	3	0	0	9	0	13	0

