eCHO

THE NEWSLETTER OF THE CULHAM SCIENCE CENTRE & HARWELL BUSINESS CENTRE **DECEMBER 1998**

A merry Christmas and a happy New Year to all our readers

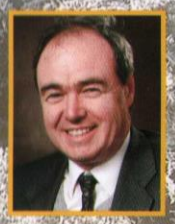
"Our thanks go to Stephen White (UKAEA) who headed Culham and Harwell sites since 1992. We congratulate Paul Williams becoming Deputy Lieutenant of Oxfordshire and welcome Bert Westwood to RAL. We thank Alan Gibson, JET, for his valuable contribution to fusion and congratulate Madeleine McDonagh (AEAT) on receiving the OBE, June Luker (UKAEA) and Robert Chandler (RAL) who received MBEs.

We celebrated 50th anniversaries of the Nursery School, BEPO reactor and neutron scattering. Tornadoes were found on the Sun and 3000 people attended the RAL Open Days. Sadly we noted the passing of Professor Ged Adams (MRC), Joan Freeman and Kate Williams (Harwell) and Davis Start and Brian Keen (JET).

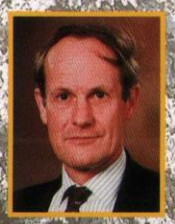
START, the successful fusion facility is taking a rest, giving way to MAST which has just produced its first plasma. Culham's new reception centre was opened and changes made to catering arrangements at Harwell. A new 'divertor' was installed inside JET's vacuum vessel using remote handling techniques. DIDO's active handling bay was decommissioned and the new ILW Vault Store is being commissioned.

AEAT helped Virgin's tilting trains, set up a forensic science alliance, studied Oxford's traffic pollution and supplied batteries for space satellites. We welcomed new tenants Energiser plc, National Power and Kim Hurst. Site improvements continued with upgraded car parking and street lights, new cycleways, landscaping and electronic signage.

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



John Wilkins
Head of Site, Harwell



Derek Robinson
Head of Site, Culham

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A winterscene in South Oxfordshire. Photograph courtesy Eric Jenkins.

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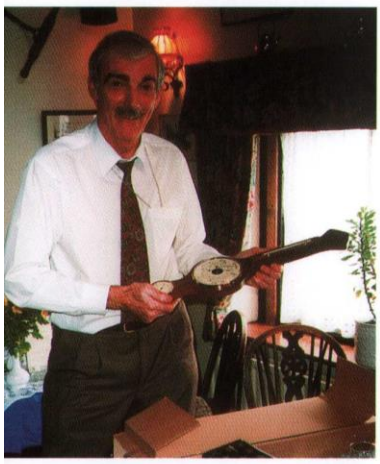
Norman Taylor's lifetime service with UKAEA

Norman Taylor retired from Harwell last month, after a lifetime of UKAEA service, totalling 41 years! He came to Harwell in 1957 at 22, with an Honours degree in Chemistry from Leeds University. It was the year of the Windscale Pile accident and he found himself working on graphite reactions studies in B10.5 for the Pile Radiation Chemistry Group.



Norman examines the barometer given by colleagues at his retirement 'do'

Throughout the 1970s he worked from B220, spending a lot of time in the DIDO reactor and on post irradiation examination work in B459. His involvement in the naval PWR programme meant trips to the HMS Vulcan establishment at Dounreay and some memorable evenings at Scapa House hostel!

During the 1980s he worked on the variable energy cyclotron (VEC), producing Iodine-123 for the diagnosis of thyroid cases. It's half-life of 13.2 hours demanded exacting conditions for its production and distribution to European hospitals. He alternated between periods of waiting for the VEC to stabilise and frenetic activity in the 'hot lab'.

His final decade started in the Authority Fuel Processing Directorate and then into R&D programme management for UKAEA's decommissioning programme. He built close working contacts with staff in Nycomed Amersham, Nirex, MOD, BNFL and the nuclear power companies.

Norman has taken up retirement locally and is looking forward to sharing a number of joint activities with Sylvia, his wife, including walking, golf, dancing, DIY and travel.

AEAC annual report notes high recruitment

In his first annual report as chief constable of the UKAEA Constabulary (AEAC), Bill Pryke describes the force's strong commitment to its core tasks of protecting special nuclear materials and classified information. In addition officers were called upon to respond to a variety of incidents, crimes and anti-nuclear demonstrations through the year. The detection rate for crime offences rose by 7% over the previous year.

The force saw the highest level of recruitment (64 officers) for some years. This level offset natural wastage and had a beneficial impact on the age structure within AEAC. An absentee monitoring group was set up in 1996/97 and resulted in an improvement in sickness leave and consequent savings in overtime costs.

Close co-operation with other police forces included assisting the Lothian and Borders Police during the meeting of the Commonwealth Heads of Government in Edinburgh.



Bill Pryke

The AEAC protects nuclear sites on behalf of UKAEA, British Nuclear Fuels plc and URENCO and its core task is to provide an armed counter-terrorist capability provided by authorised firearms officers who are trained to Home Office standards.

New limits sought for Harwell

UKAEA is seeking new radioactive discharge limits for the Harwell site. The application, to reduce the current discharge authorisations, is being made to the Environment Agency (EA).

Discharges of radioactivity from Harwell to the environment have fallen significantly over many years, as the site has changed from a predominantly nuclear research laboratory to an international business centre. The changes sought to the discharge authorisations reflect this change.

If Harwell's operations discharged at 100% of the proposed limits, an unlikely scenario, then for those individuals assumed to have lifestyles making them most likely to be exposed, the maximum doses would be 20 µSv/yr from airborne discharges and 20 µSv/yr from liquid discharges. These compare with Oxfordshire's natural background dose of 2200 µSv/yr.

More information may be obtained from Nick Hance on H6909.

OBITUARY

Professor Margaret Gowing CBE

1921-98



Margaret Gowing, UKAEA's first official historian, died after a long illness aged 77. Appointed in 1959, she retired in 1986. Margaret soon found nuclear history a rich, untapped subject for historical research and wrote her first book *'Britain and Atomic Energy 1939-1945'* in 1964. Her second book *'Independence and Deterrence'*, written with Lorna Arnold and published in 1974, became an international classic. She was to become Oxford's first Professor of the History of Science whilst still working for the UKAEA and later founded the Contemporary Scientific Archives Centre, now at Bath University. Her other interests were as a trustee of the National Portrait Gallery and being on the governing body of the Imperial War Museum. She was appointed CBE in 1981. Her husband died in 1969 and she is survived by two sons.

On behalf of the Finnish Nuclear Society and ourselves we wish to thank you for a most interesting visit in Harwell on October 15th. In the relatively short time available we were shown a lot and got a good overview of your facilities. It was interesting to become acquainted with your decommissioning strategy and also with the GLEEP reactor, for historical reasons. Please convey our warmest thanks also to Dr Kevin Langley and Mr John Buffery.

Wishing you and Harwell every success in the future.

Seppo Vuori, president of the Finnish Nuclear Society and Herkko Plit, tour organiser.

Announcing CASCAID – integrated chemical emergency planning and response

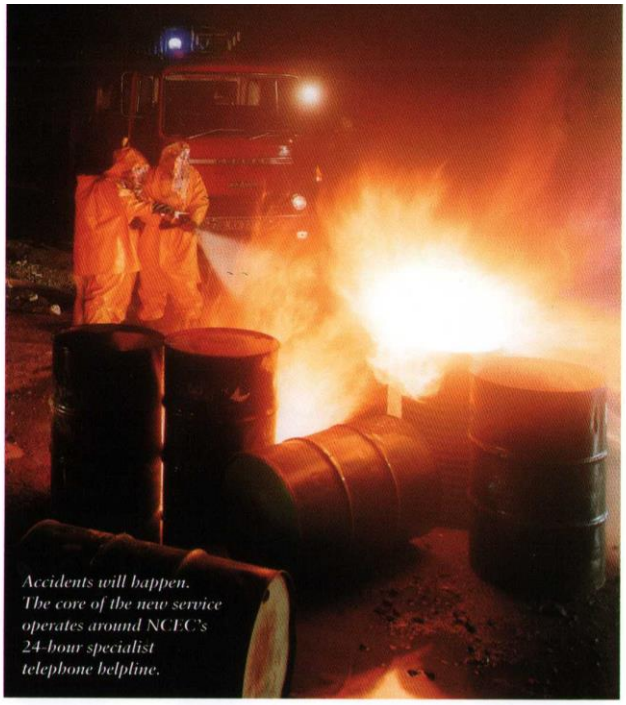
Making its debut at the Hazcon exhibition was CASCAID, a ground-breaking service which provides chemical manufacturers and hauliers with the expertise to avoid, or promptly clean up, any chemical incident anywhere in the UK.

CASCAID brings together the combined skills and expertise of AEA Technology's National Chemical Emergency Centre (NCEC) based at Culham, and environmental specialists, Sarp UK Ltd.

The pressure on chemical manufacturers and distributors to ensure safe transportation is growing. If a chemical consignment is involved in an accident there is a legal responsibility to provide emergency services with fast, accurate information about the load, day or night. Chemical spillage, particularly liquids, can cause huge contamination and environmental damage unless contained at an early stage. Environmental and financial loss can be reduced by a rapid response.

Operating 24 hours a day, 365 days a year, CASCAID has fully trained personnel available to initiate and manage the clean-up operation. Beyond this service CASCAID helps companies in many other ways e.g. examining their waste disposal options, updating contingency and emergency plans, assessing risk at manufacturing plants and in transportation, and providing an interface with regulatory bodies and industry authorities.

"It's impossible to prevent all accidents, but planning beforehand and prompt action afterwards will minimise their impact," comments NCEC manager, David King. "CASCAID can save time and money, and can lessen the risk of possible prosecution!"



Accidents will happen. The core of the new service operates around NCEC's 24-hour specialist telephone helpline.

First 'plasma' achieved



Members of UKAEA's Board recently visited MAST at Culham.

Following its assembly phase, MAST, the new spherical tokamak at Culham achieved its first 'plasma' - a helium glow discharge - at 9.22 on Friday 6 November. The commissioning of the glow discharge went extremely smoothly and according to plan. The glow discharge is a key step in the conditioning process of MAST and will be used routinely for achieving the clean vacuum conditions required for plasma operation. MAST is a larger version of START (Small Tight Aspect Ratio Tokamak), UKAEA Fusion's word record-breaking original spherical tokamak.

Board appointment

The Secretary of State for Trade and Industry has appointed Mr Stan Gordelier as a member of the United Kingdom Atomic Energy Authority. He will take up his appointment as director, Southern Division on 18 January 1999. Stan Gordelier has worked in a variety of operational engineering and liabilities management roles for CEGB, Nuclear Electric plc and Magnox Electric plc.

Farwell Margaret

Margaret Rowlands retired from Harwell a few weeks ago. Her farewell party gathered together many of her friends and colleagues from Harwell and beyond. John Stones presented Margaret with a set of watercolours, other artists materials and garden centre vouchers and other gifts were given individually.

Margaret joined Harwell in 1986 and has since worked in many areas of finance including stock control and asset inventory, finally ending her service in PPD Finance. All her colleagues would like to wish her well for the future and many happy hours with her paintbox.



NRPB studies radiofrequency exposure

A national UK study began last month to investigate occupational exposure to radiofrequency (RF) electromagnetic fields and radiation and the risk of damage to health. Various sources will be considered during the three year study, including broadcast and telecommunications. Work is being undertaken by a research team from the Institute of Occupational Health (IOH), University of Birmingham and the NRPB at Chilton.

For some time there has been concern about the potential relationship between exposure to electromagnetic fields and cancer, particularly brain cancer and leukaemia. The study also aims to determine whether it is possible to identify groups of workers who are occupationally exposed to RF and could form the basis of a future study investigating cause of death (or surviving registered cancer cases) and exposure. A number of major industrial companies with workforces potentially exposed to RF radiation are supporting the study.

New chairman

Sir Walter Bodmer, PhD, FRCPath, FRS, has been appointed by the Health Minister as chairman of NRPB. He succeeds Sir Keith Peters, FRS, whose four-year term of office ended recently.

Sir Walter Bodmer, who lives locally, is currently principal of Hertford College in Oxford and honorary head of the Imperial Cancer Research Fund (ICRF) Cancer and Immunogenetics Laboratory, Institute of Molecular Medicine, University of Oxford. He was previously director general of the ICRF from 1991-96 and chairman of the Board of Trustees of the Natural History Museum from 1989-93.

MP visits NRPB



Our photograph shows Sir Walter Bodmer welcoming Tessa Jowell MP, minister of state for Public Health on her arrival at NRPB on Monday 23 November. Professor Clarke, director of NRPB is pictured in the background on the left. Being part-funded by the Department of Health this was the minister's first visit to NRPB where she acquainted herself more fully with some of its work and met staff. It was also Sir Walter Bodmer's first official visit to NRPB as its chairman following his recent appointment.

eCHOBRIEF

Dounreay history in hardback

'Dounreay - The Illustrated Story' takes you back to the future on a photographic journey spanning over 40 years of dramatic change. Over 300 mono and full colour photos, 180 memorable pages are published in hardback with a laminated cover. Copies are on sale for £12.95. Contact Clive Richards of publishers, North of Scotland Newspapers on 01955 602424.

Christmas present ingredients

More than 50 celebrities have donated their favourite recipes to help raise money for the Springfield School in Witney. The school has over 90 pupils with severe learning disabilities and the grandmother of one of the children has produced a book featuring the personal recipes of various well-known people from MP Tony Blair to Rowan Atkinson, Ronnie Barker and Henry Cooper. All funds raised from book sales will help buy equipment for the school and specially adapted minibuses. Called 'Springfield Celebrity Stew', the book is on sale now priced at £4.95 (£5.50 inc p&p) from the school on 01993 703963 and various outlets in west Oxfordshire.

Culham hosts CBI group

'Packaging' was the theme of a meeting at Culham Science Centre, organised by the CBI southern environment group, and hosted by UKAEA. The meeting discussed how stringent new packaging regulations will affect businesses of all sizes. Speakers included Ken Brown the environmental manager at Rover and Sarah Powell from the Environment Agency in Wallingford. Steven Moss, head of the property development unit welcomed the group and arranged for the 36 delegates to have a guided tour of the JET project. The event provided another excellent opportunity to introduce the business community to UKAEA's science and technology centres.

Bob's bonus meal



PC Bob Helm's winning idea won him a free meal at the new Ridgeway Café at Harwell. Bob suggested the name and is pictured here with manager, Hilary Franklin.

Flytipping at Harwell

Johnson Controls Ltd has recently completed an exercise on behalf of UKAEA Property Management to remove flytipped items from the Harwell site. If anyone is unsure about how to dispose of any waste, please contact your Area Safety Manager/Building Manager, who will have received a waste guidance note.

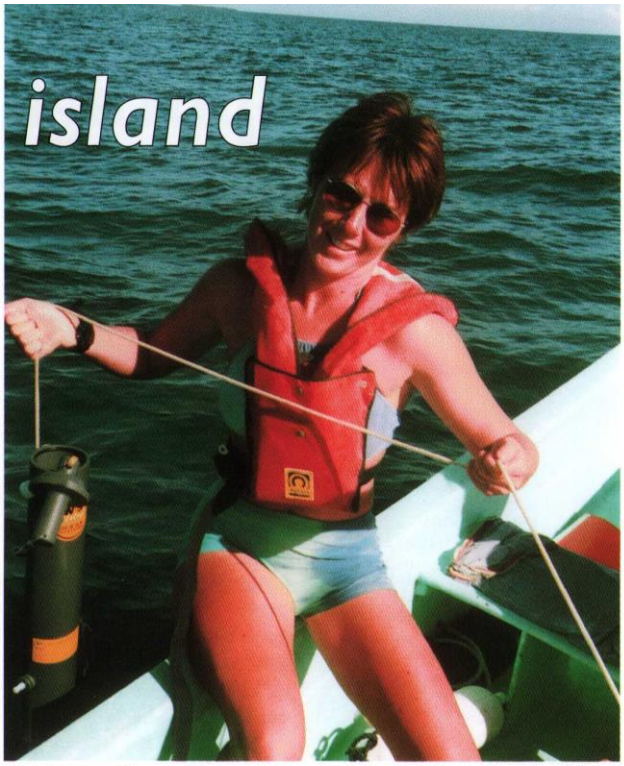
Care and Share

Prab Mistry, who works for AEAT Environment at Culham, would like to thank all who sponsored him on a charity walk in October 1998 to raise money for Care & Share International Research Foundation (Charity number 1058381). The charity holds medical camps aimed at the poor in developing countries, offering medical diagnosis and treatment by volunteer doctors - general medical and eye specialists - and assistants with some training in general nursing and administration.

The first camp was organised for India within days of the Bhopal chemical disaster in 1983, by Dr S K Upadhyay, a consultant ophthalmologist based in London. Following this he founded the charity with support from an increasing number of volunteers. Since then they have also held camps in Bangaladesh, Sri Lanka, Pakistan, Bosnia and Zambia. With the help of the colleagues at Culham and Harwell Prab raised £338.20. There were also some 60 others who took part in the sponsored walk and the organisers were confident of raising approximately £5,000.

Susie's *treasure island*

The expedition of a lifetime, living and working on a remote tropical island near Belize, was so hectic that the three months seemed like three weeks, according to Susie Byfield who has now returned to her comparatively mundane job as a contaminated land specialist with AEA Technology Environment at Culham.



Susie is pictured here with a sample of water which would be evaporated and the volume of sediment measured.



Susie's self-built 'des res'.

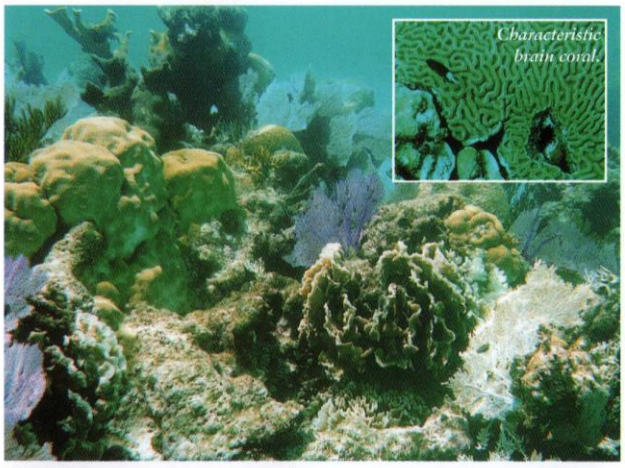
Following ten days' training in Belize city at the Raleigh International headquarters Susie and her fellow leaders were despatched to the idyllic sounding Coco Plum Caye island. The uninhabited island measuring about a mile in length with no water or electricity would be their home for the next 10 weeks. The first priority was to build a 'basher', a canvas shelter with a raised sleeping platform and one end open to the elements. Being off the ground kept away the creepy crawlies but sleep was illusive the first few nights especially during the frequent downpours. Being the rainy season these storms were frequent but lasted only an hour or so, with temperatures staying a pleasant 30 degrees centigrade with a cooling breeze.

Susie's designated role as a marine scientist - studying the coral reefs with three groups of 17-25 year old 'venturers' - quickly expanded to include becoming a diving instructor. The day would start at 6am with an alfresco breakfast followed by the first dive at 7am. Even after a second dive in the afternoon there would be evening marine science lectures and collation of research findings.

The Raleigh International project in Belize is funded by the European Union and has an on-going responsibility to measure sediment levels on coral reefs along the shoreline. Mainland cultivation has lead to soil erosion and increased sediment spilling out of the rivers into the sea is causing ecological suffocation. Tests record water temperature, conductivity and turbidity.

During her training dives with the venturers Susie was generally reaching depths of 20m but recreational dives would go deeper to around 40m. Visibility was excellent - up to 30m - compared to the murky conditions when diving in UK waters. Luckily there were no tarantulas on Susie's island but there were plenty of snakes, including boa constrictors, and geckos, iguanas and even crocodiles in the lagoon. The toilet facilities, with minimal privacy, consisted of a compost box on a three and a half metre tall platform and was called a 'longdrop' for obvious reasons!

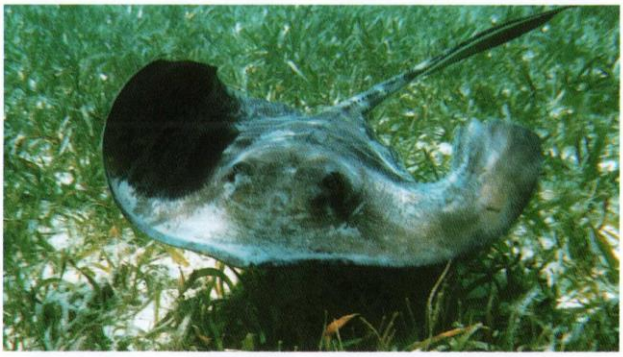
"It was such an incredible experience it's difficult to describe all the different aspects to colleagues and friends," says Susie. "My favourite time was towards the end of the trip when I was left largely to my own devices and had really gained a lot of confidence. I must thank AEA Technology for helping to fund the project. I would say that I can apply much of the skills gained in Belize to my everyday work, although the surroundings are less exotic!"



The underwater seascape was spectacular.



Nurse sharks.



A southern stingray.

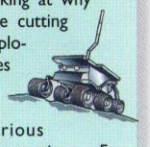
Out & About

Festival of Science and Innovation

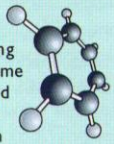
16 January - 6 February 1999.

A full programme of events, all free of charge, has been organised by the Oxford Trust, including:

- **Robots in Space,** Mon 25 January 7-8pm at Oxford Brookes University. A free lecture for all the family looking at why robots are at the cutting edge of space exploration and includes amazing 3D images from Mars and various practical demonstrations. For tickets contact David Attwood on 01865 484888.



- **Developing Gene Drugs,** The Innovation Lecture on Tuesday 26 January 6.30pm at RAL. Prof Susan Kingsman, University of Oxford and Oxford Biomedica. The lecture is followed by a reception at 7.45pm.
- **Molecules at an Exhibition,** Wed 27 January 7pm at the Museum of Modern Art. Two eminent chemists, Dr John Emsley and Prof Peter Atkins, will enthuse and inspire you with their fascinating stories about some of the elements and molecules that have made an impact on our lives.



- **Breaking the Smell Code,** Monday 1 February, 6.30pm at the Cricket Road Centre. Dr Luca Turin from UCL will describe how he has revived a discredited 1930s idea that may help us understand how the nose achieves its extraordinary capacity to distinguish between thousands of molecules.

Booking is essential for all events. Please contact The Oxford Trust on 01865 728953.

Science Technology and Art

Oxford's Museum of Modern Art is the venue for an exhibition by Gustav Metzger whose work integrates science, technology and art. Exhibits include a large drop of water held in suspension on a hot plate, a polystyrene sheet held off the ground by compressed air and a series of liquid crystal slide projections. The exhibition runs until 10 January.

Fusion Theory Christmas Colloquium

Tuesday 15 December 2pm in the John Adams Lecture Theatre, Culham. Uncle Albert: Son of Mr Tompkins, by Professor Russell Stannard, Open Univeristy. Prof Stannard has written a number one children's best-seller about quantum mechanics.

Spotlight on geology

Dig into Harwell's heritage and chalk up 100 million years of history

Harwell's use as a wartime RAF airfield and its subsequent development as a scientific research campus have preserved the natural geological conditions of the ground which underlie the site. Far from damaging the ecological diversity of the subsoil, the fact that many areas have remained in their natural state makes the Harwell campus significant both locally and nationally.

Located on the edge of the downs, Harwell sits on a wide band of chalk. The earliest of these strata - known as lower chalk - were laid down as early as 100 million years ago when a great shallow sea spread across the muds, silts and clays of north-west Europe. The chalk derives from billions of planktonic algae which lived in the sea and the lower chalk layers deposited first, are characterised by higher proportions of clays and other impurities which give it a darker colour. The lower chalk weathers more readily than the harder white chalks and so forms land of relatively low relief typically as a belt at the foot of the downs 'proper'.



The fertility of chalk land for cultivating corn was quickly recognised by our ancestors. By the post-Enclosure "golden age" of English farming, around the 1870s, few areas of lower chalk were not under the plough. A century later the Common Agricultural Policy encouraged intensive farming of corn and the extensive use of fertilisers and other agrochemicals to maximise yields.

The Harwell site subsoil has avoided such treatment and as a result boasts some exceptionally rich tracts of chalk grassland complete with orchids, ant's-nests and blue butterflies, which have long gone from lower chalk areas in general. Where the ground has been temporarily disturbed rare arable weeds can be found, such as the beautiful, intense blue cornflower and the rare and delicate Venus's looking-glass. These, and others like them, are simply no longer a part of the standard weed spectrum of the conventional modern farm.

Locating these fascinating plant communities, and planning their protection forms a crucial part of Harwell's ecostrategy for the site.

Introducing Tosca

The official inauguration of Tosca, a new £2m scientific research instrument at ISIS - the world's most powerful pulsed neutron source at RAL - was held on 1 December.

Dr Bert Westwood, CLRC chief executive welcomed guests and gave a short presentation before the inauguration performed by Professor Lucio Bianco, president, CNR, (Consiglio Nazionale delle Ricerche), the Italian national research council.

Having completed phase one of the construction of Tosca scientists are using it to carry out fundamental research into new materials. Tosca scientist, Dr John Tomkinson, explains "These materials, including plastics and drugs, have long, complex molecular structures and scientists will use Tosca to determine the dynamics and interactions of their atoms".

Teachers nominate top students

Forty students received special awards at RAL after being nominated by their science teachers for their effort and achievement. Presented by Dr Gordon Walker the awards are part of the RAL science prize scheme funded by CLRC. They received books about their study topics including astronomy, ecology, quantum physics and UFOs.

Apprentices rewarded

Seven apprentices from Rutherford Appleton Laboratory, who have completed their training this year, received their indentures from Dr Gordon Walker, director research & development at the Central Laboratory of the Research Councils (CLRC).

Dr Walker congratulated them and remarked, "This is an exciting time in technology, particularly in the field of 'smaller, smarter systems'. I'll be reading about their exploits and achievements in the newspapers long after I've retired". Dr Bert Westwood, CLRC chief executive, presented the John Wilkins Prize for the best apprentice to Matthew Roberts, who had "shown a constant commitment to his work throughout the four years of training".

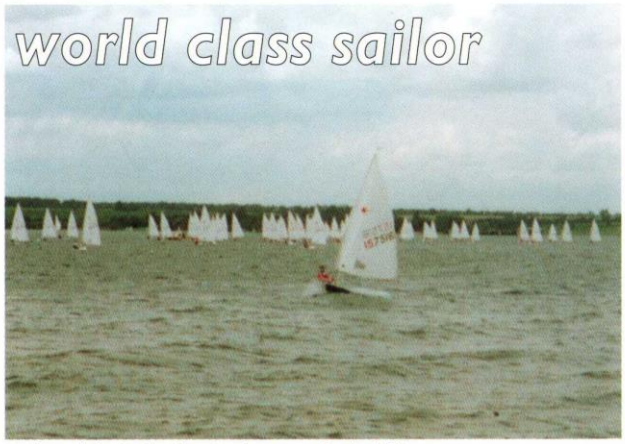
Also welcomed at the presentation were two apprentices starting their training this year, namely, Christopher Crowshaw and Andrew Daniels.



(from left) Tom Lovett, Matthew Roberts, Joseph Russell, Robert Majors, Daniel Edwards and Chris Pulker. Matthew Towndrow was unable to attend the presentation.

Australia next stop for world class sailor

Competing in world class sailing events is a wonderful way to see the world. Each trip is like a theme holiday with the added bonus of being reunited with old friends. This is the honest view of an international champion who seems little affected by her exceptional skill and success.



Lesley and dinghie battling the elements at Rutland Water.

Lesley Hotchin, a senior management accountant with UKAEA's Culham finance division, is as modest as she is talented. In 1997, after winning the European Laser Radial Masters in August, she rounded off the year by becoming First Lady Laser Masters World Champion in Chile. At the end of the Grand Prix circuit in 1998 she has won the women's competition overall. Having reached the pinnacle of this extremely physical and competitive sport she still genuinely enjoys the thrill of travelling and socialising with other competitors and expects no celebrity status.



Lesley Hotchin

She grew up in a sailing family and with her father's encouragement she began competing at 14. From the age of 21 she took the sport seriously and used to compete in two-man boats but has now decided to sail single-handed. Lesley believes it is easier to sail alone because you are free to make your own decisions without any of the complications of being part of a winning, or losing, team. At just 5'2" she is smaller than the recommended 5'9" height recommended for the Laser Radial craft and so is favoured by lighter weather conditions.

Perhaps her worst moment came during the trials for the women's world championships in 1982 at Bridlington. "I was off-shore in a two-man boat being buffeted by gale force winds which had kept even the local fisherman on dry land" recalls Lesley. "My team mate was washed out and the boat capsized in common with many of the other dinghies. Remembering the golden rule to stay with the boat, I was rescued but learnt a valid lesson. You have to respect the sea and if in doubt you don't go out!"

Many of the races take place on in-shore lakes. Typically there is a shotgun start for the 40 or so boats in the class and the two-mile course takes a triangular route. There are breaks throughout the day but most of the day is spent racing and drinks and high-energy bars provide sustenance.

As ECHO is published Lesley will be in the midst of an intensive six-week training programme to build stamina and fitness in preparation for the 1999 World Master Sailing Championships in Melbourne, Australia. She receives sponsorship from Harpers gym at the Didcot Wave where she combines aerobic and strength exercises. As an amateur sport there are no cash prizes for winners, just plaques to keep and great personal satisfaction.

The £3,000 12ft laser radials are chartered for the contest but Lesley always takes her own 40ft length of rope from her own boat. She leaves in mid-January for the two-week event and is most looking forward to meeting up with sailing friends and enjoying the hospitality and socialising which is as important as the hard-fought competition. "There couldn't be a greater contrast," she says. "On the water everyone is very determined but at the end of the day it's a very relaxed and informal party of old friends gathered together from all corners of the world."

Award for excellence



Seated left to right: Seen receiving the award from Ms Grainne McMurrow (ITM Director of Corporate Affairs) are Graeme Gettings (Project Manager) and Larry Martindale (Project Director). Also at the ceremony were senior AEA Technology Environment staff and the Customer for the work: Standing left to right: Kevin Brown (Managing Director), Gabriele Visentin (European Commission Project Officer), Mel Wood (Chairman) and Noel Morrin (Business Development Director).

The Institute of Transport Management (ITM) has recently chosen to honour AEA Technology Environment with an "Award of Excellence 1998" for its work on the 'EXTRA' project.

EXTRA is a three-year, £1.7 million dissemination project being carried out for the Transport Directorate of the European Commission. AEA Technology Environment is the co-ordinator of the project, leading a consortium of ten companies from the UK, Germany, France, Denmark, Italy, Bulgaria and Romania.

In honouring the company with this award, the Institute's strategic transport policy committee pointed to the EXTRA project as an "exemplary illustration of how the project management expertise of AEA can be utilised for the benefit of the overall EU transport environment".

Builders win Lottery

A dream came true for employees at Wantage building company, Hooks and Haines, when they scooped £3.1m on the National Lottery. The company is a building contractor at Harwell and the 15 men have vowed to keep on working despite each receiving around £208,000.

SAFETY FACTS

Lost time accidents

Culham/Harwell	**C**	**H**
Recorded since last issue	1	2
Total this fiscal year (98/99)	1	9
Total reported to HSE (98/99)	0	3
Total days lost in 98/99	1	40
Minor accidents (no time lost)		
Recorded since last issue	8	7
Total this fiscal year (98/99)	27	61

There were no radiological or non-radiological incidents at Harwell or Culham since the last issue of ECHO.

Cycling policy – *have your say*

Oxfordshire County Council's newly published Cycling Strategy has been welcomed by Harwell Bicycle Users Group (HarBUG). The strategy, which will guide transport and planning policy, will be put to consultation before all the measures are fully adopted. HarBUG is keen that cyclists use this opportunity to influence the process.

Under the strategy the County will have to take account of cyclists when designing new road schemes and will conduct a safety audit of existing roads and junctions. Developers will be expected to include measures to encourage cycling in planning applications.

HarBUG is setting up working groups to compile "action plans" for each of the main routes into site. The plans will identify dangerous roads, junctions and cycle paths and suggest how they might be improved. Potential off-road cycle routes will also be investigated. The plans will also be used in any future applications for funding.

Marcus Jones, HarBUG Secretary says "The best cycle routes are designed in consultation with the users. We want cyclists to tell us how to make cycling safer and more convenient. The county council is clearly supportive in principle, but it is up to us to persuade them to make Harwell a priority."

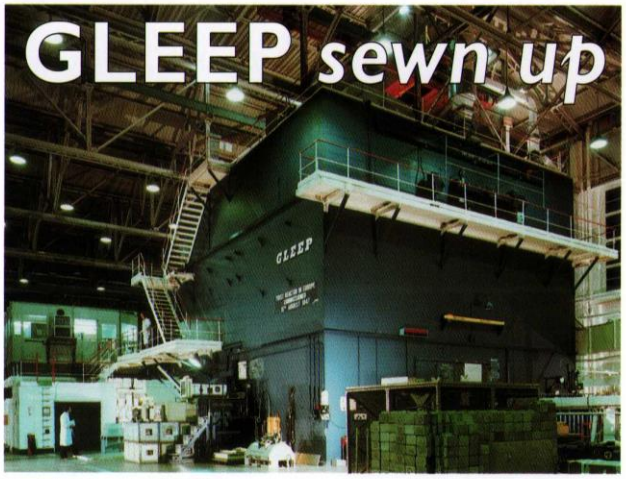
To take part in the consultation please contact Marcus.Jones@aeat.co.uk H3519.

Halloween house party



Witches, demons and ghosties gathered on the night of Halloween at a special party organised by the Culham Social Committee at the social club. Dracula's bride and attendant (Wendy Coombes and Ann Maynard, pictured here) greeted guests and ladled out a cup of Witches Brew (cranberry juice and lemonade) to each guest. A splendid supper was followed by John Smith's lively disco before the winners of the fancy dress were announced. Lyn Goddard and Nick Goddard won bottles of wine as the adult winners and videos were won by Harry White and Felicity Compton in the children's section. Despite a very wet night around 50 people had a very enjoyable evening. Thanks go to Wendy and Ann for the impressive decorations and all the hard work to organise the event.

GLEEP *sewn up*



The GLEEP reactor 1947–90.

The Oyster Lacemakers & Stitchers of Whitstable are on target to complete their allocated panel for "1947" of the Millennium Tapestry portraying every year of the 20th Century. The 1947 panel includes Harwell's GLEEP reactor, which went critical in August of that year.

Said Kay Robertson, leader of the lacemakers group, "We have completed the sections on the marriage of the Queen and the breaking of the sound barrier and put in the skyline sections of the Palace of Westminster. GLEEP is due to be sewn in the montage of 1947 world events in January and we shall finish the panel by June 1999." Other 1947 events include the end of British rule in India and the devastating floods in East Anglia.

The finished tapestry will be unveiled at Greenwich early in the year 2000 and will measure over 250 metres in length. It will then go to Australia where its ten-year world tour will be launched from the Olympic Games. Monies raised by the tour will go to 'War Child'.

England *call up*

Peter Flavel, a member of UKAEA's safety and environment division, was chosen to represent England in the 45-49 age group at the annual British & Irish Veterans cross country international held in Wales a few weeks ago. On a tough course he came fifth in his age group, fifteenth overall in a field of 170 and helped England win the team race.

He is a former senior GB and England international athlete on the road and cross country, and returned to competitive racing last winter after a 15 year absence from Achilles tendon injuries. Peter, who turned 45 last January, is the reigning national veterans cross country champion and over the last nine months has also won the South of England veterans cross country title and been placed third in both the 5km and 10km national veterans road race championships.

Next summer sees the European veterans road race championships in Bruges, Belgium, and the world veterans track & field championships coming to Britain for the first time. Both events certainly feature in Peter's racing plans for 1999.



Peter Flavel tackles an uphill stretch.

Harwell Laboratories RECREATIONAL ASSOCIATION

Questionnaire answers

The Management Committee of the Harwell Recreation Association and the Harwell Bicycle Users Group (BUG) issued a joint questionnaire to all workers on the Harwell site about the future provision of social and recreational facilities into the next millennium and beyond. 593 replies were received, 450 from HLRA members, 81 from non-members and 62 from ex-members. 279 replies were from AEAT staff, 99 from UKAEA, 56 from NRPB, 30 from Johnson Controls, 14 from MRC, 7 from UK Nirex Ltd and 52 others.

Of the many comments received, the majority favoured the continued availability of low-cost recreational and sporting facilities on the Harwell site. There was also strong support for extending the facilities with multigym and swimming pool among the most favoured for any future redevelopment. Many people commented on the state of the Social Club building; this building is closing in March 2000 and it is therefore uneconomic to redecorate and modernise it. There was also considerable support for improved facilities for cyclists (designated cycle paths and changing facilities across site) but the majority of replies indicated a reluctance to cycle due to lack of time, fitness, distance and the large volume of traffic on main roads.

HLRA will use the results in discussions with all the employers on the Harwell site. We would like to thank all of you for taking the time to fill in the questionnaire and for the many helpful comments received. If you would like a copy of the questionnaire results please contact Mark Cowper on H6345.

Annual General Meeting

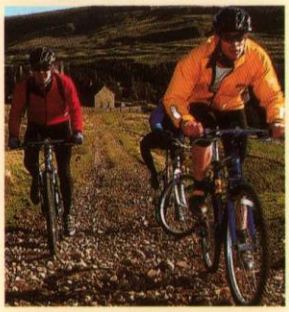
The HLRA AGM will be held on **Wednesday 20 January 1999** at 12.30pm in the upstairs function room, Harwell Social Club. Nomination forms for positions on the management committee are available from the Rec. Assoc. office, B161, Harwell or call H3296. Proposals for consideration at the AGM should be submitted in writing (and seconded) to the association secretary, no later than Wednesday 6 January 1999. Decisions will be taken at this AGM which will shape the future of the Rec. Association. Members are therefore urged to make every effort to attend. Use your vote .. support your association!

Harwell name up in lights



The words 'Welcome to Harwell' lit up the sky and marked the start of this year's impressive firework display which attracted around 4,000 people. Blessed with a dry, warm evening the bonfire - which had grown to the size of a small pre-fab - was lit and staff and their families joined in the countdown to the moment when the first touchpaper was alight. The crowds enjoyed a half-hour of sizzling fireworks ending with another lancework message telling them 'That's all folks'! Thanks go to organiser, Tony Betteridge, and his tireless display team, and to AEA Technology and UKAEA for their generous sponsorship.

Harwell mountain-biking



- Bored at lunchtime with the same old sandwiches?
- Why not eat dirt instead?
- The mountain bike club offers low key excursions to the Downs at lunchtime.
- Friendly atmosphere, beginners welcome. Membership free and discount at Witney cycles.
- Contact Mat Gerring H2458.

Christmas Eve

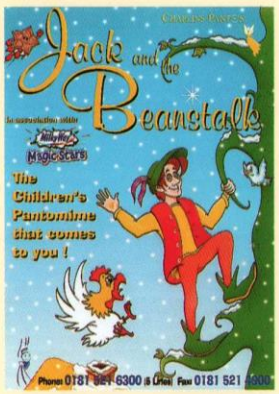
The bars will be open from 12noon to 2.30pm on Thursday 24 December. Free hot mince pies to the first 200 customers. Open house - members and non-members welcome.

Christmas Raffle

FIRST PRIZE - a portable colour TV. Other prizes include meat and drink and other festive items. Draw board in Social Club bar. Choose your own number (1-500). £1 per number. Draw takes place at 1pm on Thursday 24 December in the Lounge Bar. All proceeds to the Recreational Association. If you're not in it, you can't win it!

Jack & the Beanstalk Panto

To be staged at Harwell Social Club on Thursday 7 January 1999 at 7pm. A two hour show by a professional cast, suitable for all ages. Refreshments and bar open for 'older children'! For this family entertainment the Harwell Social Club will be open to all. So please help us fill the hall and brighten up a winter's evening. Tickets £2 from the Rec. Assoc. office (H3296) and the Social Club bar.



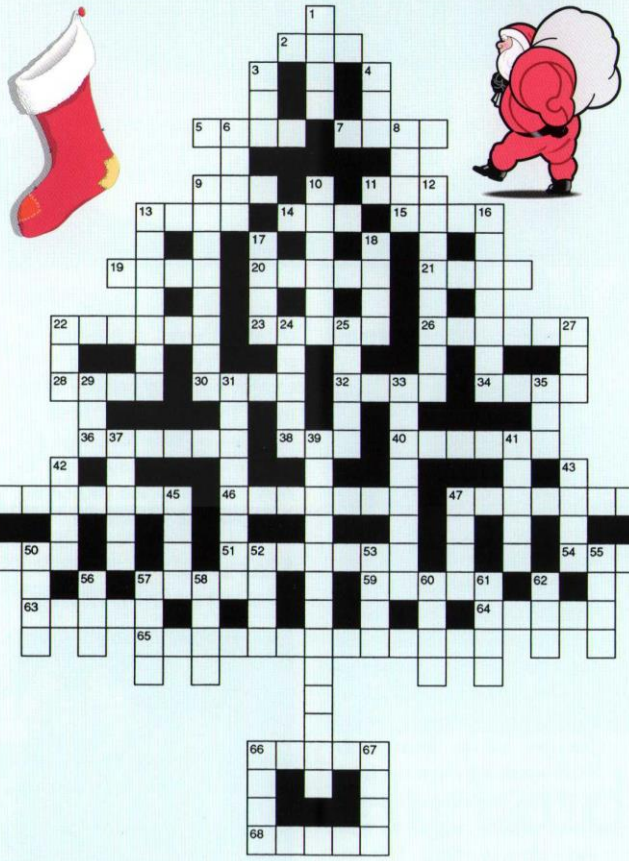
Christmas/New Year holiday

The Social Club will be closed in line with the site closure from 3pm on Thursday 24 December until 12noon on Monday 4 January.

The management committee wishes all members a Merry Xmas and a Happy New Year and looks forward to your continued support through to the Millennium!

Christmas Tree Crossword — *WIN a £20 book token!*

Have fun tackling ECHO's festive crossword and you could win a £20 book token. Please return your completed crossword and survey to: RITA HIGGS, B521, Harwell, Didcot, OX11 0RA by Monday 11 January 1999. Don't forget to fill in your name and extension no. below.



CLUES DOWN

1 Mail, from _ _ _ _ box to letterbox
3 Eaten pm, drunk anytime
4 You can get sandwiches or drunks there!
6 Such a shine is prohibited
8 On the level
9 'I see you!' . . . in a childish way
10 A ringing request for aid?
12 Drying-up towel (3-5)
13 Adorned with celebrities
16 A mug can handle a drink?
17 Cinderella had one before the ball
18 Fun and games
22 Hardly Cinderella's carriage!
24 A play in song
25 Illumination
27 Leading lady of the night?
29 Cheeky little devil!
31 Odd gluts of it incite yellow fever! (4-4)
33 Shop assistant who's no lady
35 It fits well inside the front door
37 Astonish your friends with intricate passages
39 Xmas wag via Royal Mail (9, 4)
41 Pixies
42 Wags may write it on Santa's bag!
43 Cost-conscious highlander!
44 Broad ribbon for adornment
45 A strong feeling it's no score
47 Fruity time of the month?
48 Would that we were always so green . . .
50 United Nations do come apart
52 Spumante needs a prefix as it stands
53 An old-fashioned mum
55 Mum's sister
56 Country pub
57 and 58 American singer and his supper! (4, 4)
60 Silence with jokes
61 Master of the House
62 A generation, more or less
66 Spiritless kind of 68
67 The best of this for the New Year

CLUES ACROSS

2 It's back at the bottom of this plant!
5 and 7 This plant!
9 Fizzy drink for dad
11 Favourite Christmas present, though ill-advised
13 Noted and heard in a play
14 Pat is quite fitting for the role
15 That's well and concisely put!
19 Plunder Santa's bag
20 Just perfect!
21 Vessels for pop but not heavy metal!
22 Angelic child
23 She'll bear a crown when she's full grown
26 One of these, say the Bells of St. Clements
28 Robin or turkey for Christmas dinner?
30 A giant that Jack killed
32 Golly gee!
34 Mother Goose is made in drag
36 If it's gift-wrapped, pass it on
38 Play the part of a cat
40 Secure it against theft, Lucy!
44 Ice dance?
46 A small number of Disney characters — seven, actually!
47 A house of peace, vet cooed (4-4)
49 Guns make a come-back in the saloon
51 Thin-skinned mandarin orange
54 False story about old wives?
57 Dissolves
59 Do me a favour and be one
63 Caned for doing a jig?
64 Music-maker with a kind of monkey!
65 Carol has a way with cattle (4, 2, 1, 6)
66 Name that song!
68 Now name your poison!

READERSHIP SURVEY

We try to balance news from businesses and sites and it would help us to know whether ECHO is succeeding. Please spend a few minutes completing and returning the questionnaire to: RITA HIGGS, B521, Harwell, Didcot, OX11 0RA.

Score '1' (Excellent) to '5' (Abysmal)

ECHO FEATURES	SCORE
Major features	
Business news	
Property and grounds	
Sport and staff stories	
Historical and obituaries	
Out & About	
ECHO Brief	
Classified adverts	
Quality of writing	
Quality of pictures	
Quality of layout/design	



Name: .....

Tel: .....

I work for: .....

at Culham / Harwell / RAL / NRPB / Other
(Delete which does not apply)

If you would like to see any changes, please comment below:

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Season's Greetings from Safeguard International

Earlier this year Safeguard International decided that rather than spend money on Christmas Cards they would prefer to donate the money to charity. The chosen charity was ABC (Action Against Breast Cancer). Patricia Leathem, ABC director, kindly accepted a cheque for £450 from Mr Richard Yelland, SI sales manager, at a recent presentation. All the staff Safeguard International would like to wish our friends and colleagues a very Merry Christmas and a prosperous New Year.

Last posting dates at Harwell

Royal Mail air mail - Europe 10 December, rest of the world 5 December. For bulk mail there is a saving of 50p per kilo. Deliveries take 5-7 working days to Europe and 7-21 to the rest of the world. Bundles must be marked 'Xmas mail' if you wish to use this service.

UK inland post - 1st class 22 December, 2nd class 21 December. The last delivery and collection by JCL post room before Christmas will be on the morning of Thursday 24 December.

Parcels (air/sea/road freight) - to allow for completion of the necessary documents please ensure goods are with despatch by 2pm 22 December for LEP or 10am 23 December for TNT, DHL, FEDEX (Securicor).

FOR EMERGENCIES PLEASE CONTACT AMANDA KENNY ON H5880 WHO WILL HELP WHEREVER POSSIBLE.

Tasty pancake wins Great Egg Race

Would you be up to this challenge? Within five hours you must design, build and demonstrate a machine which will toss a pancake and automatically add lemon and sugar.



(from left) Tom, the familiar figure of Prof Wolff, Helen, Alistair and Catherine.

That was the prospect facing a team of four AEA Technology staff who took part in the 'Great Egg Race' held at Oxford Brookes University and hosted by Professor Heinz Wolff.

Called 'Don't Imitate; Innovate!' the team all work in AEAT's Engineering Projects Division. Helen Garrington, Tom Liddell, Catherine Tubb and Alistair Barclay were totally unaware of their challenge prior to arriving on the day. Their raw materials were wood, nails, elastic shot card, string, a solid fuel burner, frying pan, baking tray, various tools and, of course, the pancake mix!

Out of total marks of 100, half were awarded for technical merit and a quarter each for how well the device was 'sold' and the taste of the pancake, with extra marks if automatic lemon and sugar dispensing was achieved. AEAT's foursome scored a very creditable 88 to win the contest.

"Heinz declared our pancake the best he had tasted" says Helen. "Everyone knows that boys can't cook and we were the only team with two girls on board. We were also praised for the way we 'promoted' our device - it wasn't very subtle, we just persuaded everyone it was the best!"

The Great Egg Race has evolved from the BBC2 series shown in the 80's where teams built a machine to transport a hen's egg, powered by an elastic band. The 'car' travelling the furthest was the winner. The event at Oxford Brookes - where Professor Wolff once studied - was organised by the Institute of Mechanical Engineers young Members' Thamesway branch.



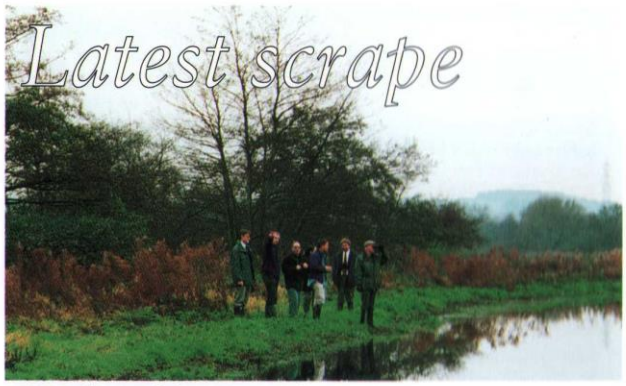
The device may not be beautiful but it was superbly functional!

ECHO 1999 PUBLICATION DATES

Why not pin on your noticeboard, or make a note of the copy deadlines in your 1999 diary.

1999 ISSUE	COPY DEADLINE	PUBLISHED ON
FEBRUARY	Mon 18 January	Wed 3 February
MARCH	Mon 15 February	Wed 3 March
APRIL	Mon 22 March	Wed 7 April
MAY	Mon 19 April	Wed 5 May
JUNE	Mon 17 May	Wed 2 June
JULY/AUG *(12-page)*	Mon 28 June	Wed 14 July
SEPTEMBER	Mon 23 August	Wed 8 September
OCTOBER	Mon 20 Sept	Wed 6 October
NOVEMBER	Mon 18 October	Wed 3 November
DEC/JAN *(12-page)*	Mon 22 November	Wed 8 December

Latest scrape



BBONT officers with their sponsors at the 'scrape'

A new wildlife habitat has been created by UKAEA and the Environment Agency (EA) at the 30-acre Cholsey Marsh nature reserve.

The reserve, managed by the Berks, Bucks and Oxon Naturalists Trust (BBONT), is an important wintering site for rare birds. A new man-made shallow lake, or 'scrape', measuring 100 metres long by 25 metres wide and one metre deep, helps keep the neighbouring marshland wet throughout the year, so encouraging a rich variety of water fowl to winter there.

Already the new scrape has encouraged new residents - Water Rails, whose cry sounds like a squealing pig, and golden brown Egyptian Geese. An unexpected bonus has been the discovery that Cholsey Marsh has become the largest site in the UK as home to thousands of tiny (2 mm diameter) very rare water snails - Desmontin's Whorl Snail. (A very much smaller colony of these snails held up completion of the Newbury By-pass until they had been translocated).

UKAEA's cash donation of £1000, raised by staff through JCL's waste paper recycling 'blue box' scheme was matched by work done by the EA in a project worth over £6,000 in all. The 'scrape' was formally opened by BBONT director, Martin Spray, with representatives from South Oxon District Council, UKAEA, EA and the media, in November.

Culham Christmas Eve arrangements

Catering - The restaurant will be open for Brunch service 08.15 to 12.15 - Full English Breakfast, soup, pies, pasties, chips, beans. The Culham shop (E2) will be open 08.15 to 12.15 and the coffee lounge will offer a normal service and be open 08.00 to 12.15. All services are closed from 12.15 on 24/12/98 until 08.00 04/01/99.

Postal Services - Last collection at 11.00 from postal distribution points on Christmas Eve. Closed from 12.00 on 24/12/98 until 07.45 04/01/99.

STOP PRESS . . . STOP PRESS . . .

As ECHO goes to press AEA Technology has published its half year results

Sales	-	**£166.6m**
% increase on 1997	-	**31%**
Operating profit	-	**£10.6m**
% increase on 1997	-	**20%**

THE COPY DEADLINE FOR THE NEXT ISSUE IS: Monday 18 January for publication on Wednesday 3 February 1998.

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Editor: Valerie Judd.
Tel. (01865) 331153 Fax. (01865) 331154.
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Nick Hance, RM1-72, 521 Harwell.
Tel. (01235) 436909 Fax. (01235) 436899
Copy can be sent directly to the editor via e-mail:
vjpr@globalnet.co.uk