



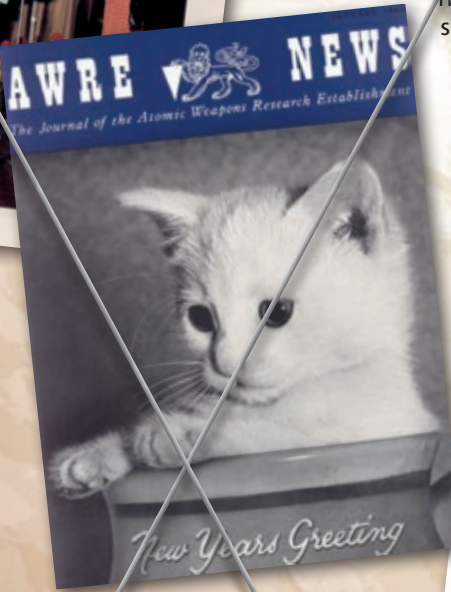
the newsletter for AWE's neighbours

Connect

TELL US YOUR AWE STORIES



In 1950, an airfield which had been used by the US Army Air Force during the Second World War close to the village of Aldermaston became part of Britain's defence history. In the following years, The Atomic Weapons Research Establishment (AWRE), renamed as The Atomic Weapons Establishment (AWE) in 1987, became a major local employer, changing the surrounding community forever. To celebrate almost 65 years of the establishment's history, we are asking the readers of *Connect* to share stories and photographs of the organisation so we can tell your story.



Learn
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AWE managing director Kevin Bilger welcomes you to this special edition of *Connect*...

Please help us chronicle our shared history

I am pleased to introduce myself as AWE's managing director. Since joining in October, I have been familiarising myself with the sites and the extraordinary people who comprise the AWE community.

Our Aldermaston and Burghfield properties span more than 1,100 acres. Despite our physical isolation, we strive to be a good neighbour and integrate within the broader community through our employee and company-sponsored outreach efforts.

We are also committed to environmental stewardship and community engagement.

Connect allows us to highlight and communicate our outreach

efforts. In this edition, you will read about the promotion of science, technology, engineering and mathematics (STEM), AWE's commitment to operating safely and securely and contributions that benefit the community.

Our workforce continues to support local schools to promote STEM and generously raise money for local charities – more than £27,000 during the past 18 months.

In this edition of *Connect*, I'm asking for your help to create a digital community storybook chronicling AWE's history.

As a key community member since early 1950, AWE shares a deep heritage. Many of you will

have stories and/or images of AWE that we are keen to see and hear – please share these with us. More information on how to contribute to the storybook can be **found on page 4**.

I wish you all a prosperous New Year.



Commitment wins award

AWE's long-standing commitment to charity Naomi House and Jackspace was recognised at their 2014 Corporate Charity Awards.

For more than 15 years, staff from AWE have been donating to this exceptional local charity which cares for life-limited and life-threatened children, young people and their families.

AWE Community Committee Secretary Michele Maidment said: "AWE is committed to supporting local charities and proactively encourages staff to volunteer and either fundraise or give time to their chosen charities."

Keith Wilson from Naomi House said: "When a company chooses to support Naomi House and Jackspace we are, of course, delighted. But when a firm chooses to support us year after year it is hugely beneficial to our operation."

"Long-term support helps us to plan for the future, and to promise families that we will be there for them next year, and the next... and the next."



Website now has 'local' page

AWE has upgraded and redesigned our website – www.awe.co.uk – to make it more accessible.

A document library provides easy access to public information leaflets, reports and technical papers. And we now have a page dedicated to the AWE Local Liaison Committee. It is also designed to be accessible via all mobile devices.

AWE's head of corporate

communications Fiona Rogers said: "We know our local community values the channel as an important source of information on latest news and activities."

"It also provides the wider public with a better and more informed view of our business, our operations and, through case studies and job profiles, what it's like to work here."



To receive a digital version of *Connect* email Connect@AWE.co.uk



Committee members, left to right, Jon Chishick, David Shirt and David Leeks

Local Liaison Committee (LLC) is your link to AWE

Do you know about AWE's Local Liaison Committee (LLC)?

Made up of 31 representatives from local authorities in Berkshire and Hampshire the, LLC is your link to AWE.

It meets quarterly at AWE to discuss matters of interest to local people.

The meetings are an opportunity for members of the public to ask questions through their LLC representatives. AWE encourages members to submit agenda items of interest from their local community.

Representatives of AWE's independent regulators – the

Office for Nuclear Regulation and the Environment Agency – also attend the meetings. Regulators give independent updates on company performance and progress and also produce a quarterly performance report, which is shared with members at the meetings and published on their websites.

'Happy to answer any residents' concerns'



In the first of a regular series on LLC members, we talk to Irene Neill, elected member of West Berkshire Council...

"I was first elected to West Berkshire Council in May 2003, representing Aldermaston Ward (Aldermaston, Brimpton, Midgham, Wasing and Woolhampton) and became a member of the LLC in 2003 as a West Berkshire representative."

"In that time, I have attended LLC meetings and also training sessions/exercises led by the West Berkshire contingency officer in conjunction with AWE and other major stakeholders in the External Emergency Plan."

"These are held regularly to ensure all participants are exercised in dealing with an emergency, no matter how large or small a part they play. I have a good working relationship with AWE and am able to discuss issues of concern on behalf of residents

when the need arises. The representatives of the local parish councils share information at local level and I make information available to all elected members in the member area in council offices."

"I am also happy to answer any queries or concerns put to me by residents – if I do not know the answer I shall try to find out."

"I have also recently been involved in a working group which has looked at the membership, terms and conditions and general operation of the LLC. On a personal level, I live in Brimpton with my husband. I have a grown up daughter and son and two delightful grandchildren."

To submit your story for the digital community storybook, email stories@awecommunity.co.uk Alternatively, if you wish to submit paper copies or disks, please send to: **AWE Stories, PO Box 66792, London, WC1A 9JZ** Don't forget to supply a return address.

A VITAL PART OF OUR DEFENCES...

Kate Pyne AWE historian

AWE's historical role in "the bomb" goes back to events stemming from the first practical scheme for an atomic warhead which emerged from a British university early in 1940.

Such a warhead would be light enough to be carried in a bomber. A committee of leading British scientists assessed the idea and concluded that it would work.

This committee, known as the MAUD committee for security purposes, took a statement from the original 1940 proposal that the only defence against such a weapon "was a threat from a similar weapon" and broadened it into the view that "no nation could afford to be without a weapon of such decisive possibilities".

Resources to make an atomic bomb in Britain were not available during the Second World War because of other heavy demands. But afterwards, despite dire economic circumstances, Britain

decided nuclear weapons would form a vital part of the nation's defences.

Based partly on work at Los Alamos to develop the atomic bombs dropped on Japan, to which a small number of British scientists had made major contributions, a British programme to produce its own atomic warheads and the associated science and technology began at Fort Halstead in Kent in June 1947.

The site proved too small for the manufacture of plutonium components and a move to Aldermaston began in 1950. With partners in various government organisations and industry, the warhead was turned into a useable weapon. It was tested in 1952 and entered service with the Royal Air Force a year later.

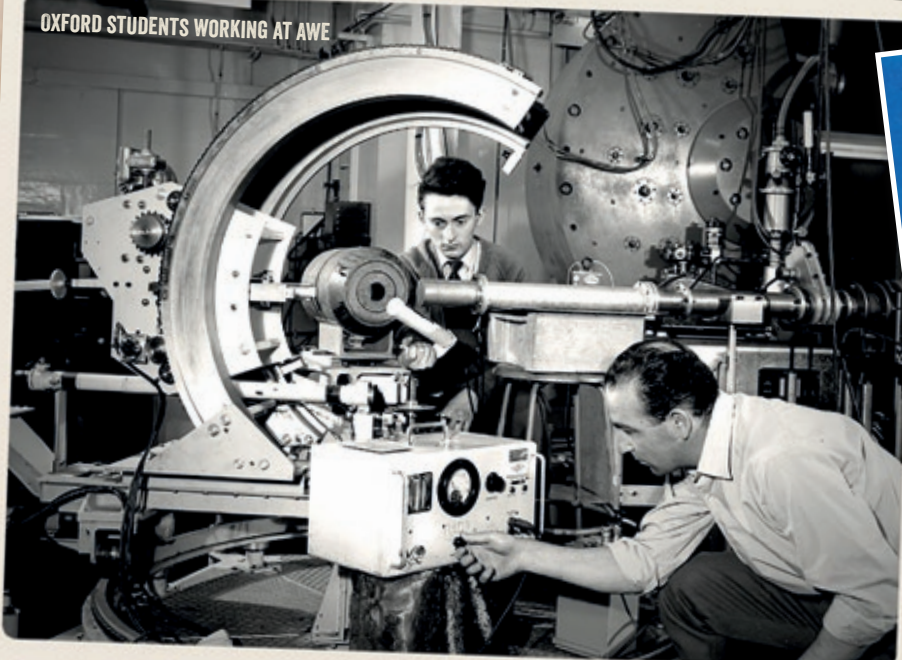
This historical role has continued for other warheads and weapons under various managements and changes of name down to the present day AWE.

ALDERMASTON AIRFIELD



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OXFORD STUDENTS WORKING AT AWE



AWRE NEWS
FEBRUARY 1983



AN INTERESTING JOB COULD BE A PHONE CALL AWAY



Industrial Recruitment

**PAST
TIMES**

Can you help AWE tell the story of our community?

For more than 60 years, the AWE name has been synonymous with excellence in science, engineering and technology, in support of the UK's nuclear deterrent.

But, as local residents, you know that the story of AWE is about much more than that. We've been part of the local community since 1950 and, in that time, many of you have worked with us, met us at events or simply passed by our gates.

Whatever your relationship to AWE, we want to hear your stories.

We are developing a digital community storybook – an interactive, easy-to-use and fun resource telling the story of AWE and the surrounding areas, from the 1950s to the present day.

It will document the important milestones for local residents and organisations. To achieve this, we need your help.

We want this project to be truly collaborative – we simply can't tell this story without you.

So, do you have particular stories of how AWE has inspired you? Perhaps you've been involved in a schools event, or work with a charity which AWE has supported.

Maybe you are AWE alumni or have just joined its apprentice scheme. Or you may be a keen photographer or local historian. Our community is made up of a wonderful mix of people and the community storybook will reflect that. No matter your interest, we want your input!

We're looking for all types of media – and this content can come from any time in the last six decades. Some options are photos, videos, audio files or simply write your AWE-inspiring story.

QUEEN'S VISIT OPENED LASER

In 1979, The Queen made a historic visit to AWRE Aldermaston when she officially opened the predecessor to the Orion laser.

On June 29, The Queen was shown around the HELEN laser by head of radiation physics Dr John Weale.

For more than 20 years, AWE's HELEN laser contributed vital data in the field of high temperature warhead plasma physics. The laser was decommissioned in 2009.

DR JOHN WEALE, HEAD OF RADIATION PHYSICS DIVISION, DESCRIBES THE TARGET CHAMBER TO THE QUEEN DURING HER VISIT TO OPEN THE HELEN LASER IN 1979



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THE QUEEN IS ESCORTED AROUND AWRE

... AND THE PRESENT DAY

DUKE HAILS 'IMPORTANT WORK' ON ORION TOUR

His Royal Highness the Duke of York visited the world-leading Orion laser facility at AWE in November 2014.

The Duke toured Orion in his capacity as UK Patron of the International Year of Light 2015 – a United Nations initiative to raise awareness of light science and its applications.

Orion is a high-powered laser the size of a football pitch and is one of the largest capital science investments in the UK. The laser

can create conditions similar to those found at the heart of the sun and provides exciting opportunities for building and sharing knowledge.

The Duke met with senior scientific figures from AWE and members of staff at Orion, who explained the capabilities and workings of the laser.

Following his tour, the Duke said: "It is not often that people get the chance to really appreciate the work that goes on at AWE. What

you are doing is absolutely important. Your establishment and, in particular, Orion present an exciting opportunity for young people interested in a career in science and technology."

Dr Graeme Nicholson, AWE technical director, said: "AWE is delighted the Duke of York chose to visit Orion in his role as patron of the International Year of Light. We are extremely proud of the work carried out at Orion which provides essential support to the UK's

nuclear deterrent programme.

"High-powered lasers enable us to replicate in the laboratory the physical conditions at the heart of a nuclear detonation – albeit on a minute scale and over a tiny fraction of a second. Working at pressures and densities found nowhere else on earth, these plasma physics experiments underpin the UK nuclear deterrent programme."



The Duke of York meets with, left to right, Dr Graeme Nicholson, AWE technical director, Dr Mike Baker from the Ministry of Defence, Rob Fletcher, AWE deputy managing director and Professor Andrew Randewich, chief scientist

Sharing news helped build team spirit

The early years at the Aldermaston site were filled with energy and enthusiasm as construction began to create many of the buildings that still remain today.

As the establishment grew, peaking at almost 9,000 employees in 1962, so too did the community around AWRE Aldermaston and this meant the establishment needed to communicate with the growing number of staff.

In November 1953, the first edition of *AWRE News* was published, packed full of local business adverts, information about innovations on site and lots more.

In the first edition of *AWRE News*, director William Penney, who assumed the position in 1953, wrote: "In a large establishment like this one we tend to fall into scattered groups and a magazine is a valuable means of keeping us in touch with each other's activities. As we have gradually grown in numbers there have been encouraging signs of a growing team spirit."

For 53 years, this magazine was published regularly, informing staff about what was going on in the local community and on site.

In the 1971 edition of *AWRE News*, the then Sir William Penney delivered this message: "The 21st anniversary of AWRE at Aldermaston brings back many memories to me. The speed at which an old wartime airfield was changed into a technical establishment was remarkable.

"There were enough buildings to

take the early arrivals, but fine technical buildings and offices grew from the ground to roof level in a couple of months and were occupied in less than a year. A motor transport section sprang up overnight in an old hanger; a small canteen staff worked miracles in producing good meals; some gardeners were suddenly there, the grass was cut and rose beds planted."



INNOVATION AT AWE

Between 1965 and 1974, Britain voluntarily ceased underground testing and suspended the nuclear warhead development. Using its wide-reaching technical capability, AWRE embarked on a diversification programme of research and development into non-nuclear areas.

This was an attempt to retain experienced staff by providing "interesting" work.

One such prototype in 1967 was an artificial hand remotely controlled by myo-electric impulses from the user's muscles. The hand was developed into a sophisticated system by AWRE. Other medical developments by scientists included the development of a titanium alloy hip joint and a laser scalpel manipulator.

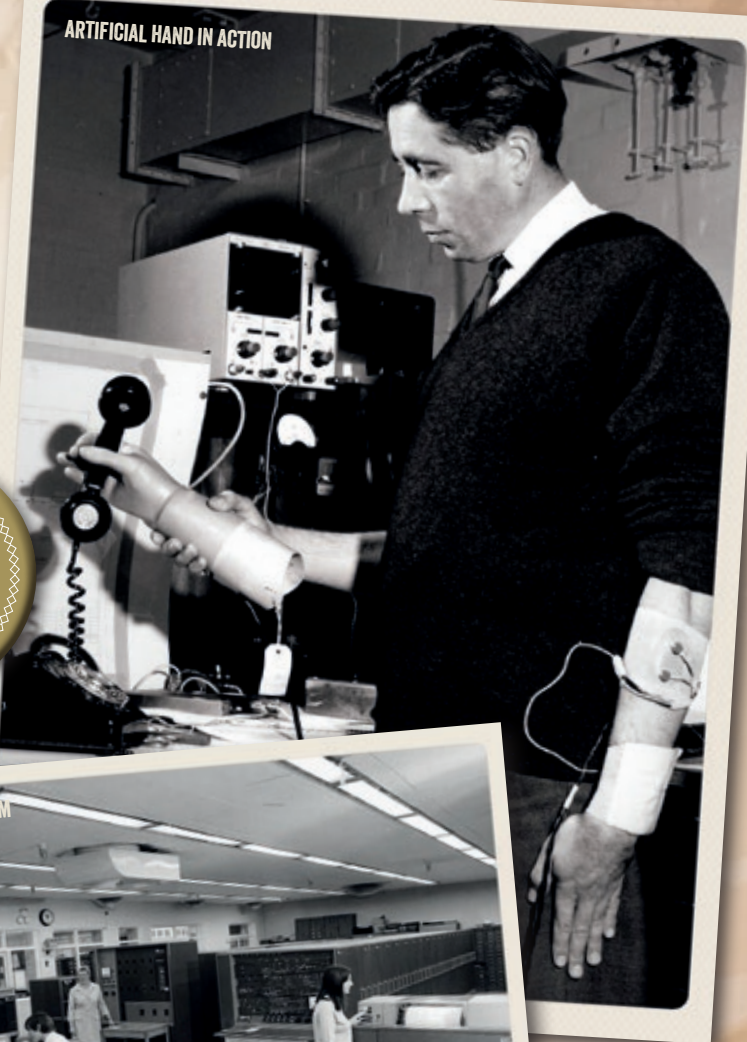
In 1969, at the peak of the diversification

programme, AWRE had collaborated with 27 hospitals and had filed 17 patents – there was even an attempt to improve production methods for ladies' undergarments.

Due to the nature of the weapon, many specialist techniques have been developed by AWE. For example, Aldermaston has been at the forefront of developments in high-speed imaging. Techniques developed have included charge couple device (CCD) imaging technology which enables the capture of finely detailed images at high speed.

This period of innovation didn't deter from AWRE's main role of supporting the MOD's nuclear deterrent programme.

PAST TIMES



JOHN CHALLENGS FITTING THE DETONATORS TO THE HURRICANE DEVICE THAT WAS DETONATED IN BRITAIN'S FIRST NUCLEAR TEST IN 1952



THE COMPUTER ROOM



A POTTED HISTORY...

John Challens was a scientist who joined the UK atomic bomb project in the very early days, and was entrusted by William Penney with developing the electronic firing mechanism for the Hurricane test in 1952. He rose through the ranks of senior staff at AWE to become its director in 1976 before retiring two years later.

Scientific and technical computing has played a major role in AWE's work over the past 60 years.

One of the first computers for mathematical physics was delivered to AWRE in 1955 with a building constructed for the computers completed the following year.

In 1979, the first "supercomputer" arrived at AWRE.

Computers are used for the purposes of physics, engineering and modelling.

High-performance computing now underpins AWE's science programme to deliver the UK's deterrent with advanced supercomputers installed at AWE in 2014.



National efforts win recognition

AWE staff were nominated in the 2014 Women in Science and Engineering (WISE) awards.

The annual awards recognise inspiring organisations and individuals actively addressing the core concerns of WISE – promoting science, technology, engineering and mathematics to girls and young women.

AWE apprentice Samantha McRae and AWE safety adviser Jenny McGrother were both recognised for their contributions to a national campaign to encourage more women into science, technology, engineering, and mathematics (STEM) roles.

Samantha was shortlisted into the final three from 24 nominations in the WISE apprentice category for the work she has done with local schoolchildren.

Jenny, representing Prospect union, was not only shortlisted for the leadership award, but was also highly commended for the work and events she has done to encourage more women into STEM and other roles in male-dominated environments.

Jenny has influenced many of her colleagues at AWE and Prospect and has presented nationally on the topic of “unconscious bias”.



Former apprentices met to reminisce about working for AWE in the 1950s

PAST TIMES

Fifties' apprenticeship 'the best'

Past apprentices from the Atomic Weapons Research Establishment (AWRE) came together to remember their first jobs.

AWRE has had a thriving apprenticeship scheme for more than 60 years, giving career opportunities to generations of scientists and engineers. The former apprentices meet on an annual basis to reminisce about working at AWRE in the 1950s.

As young men, they were some of the first apprentices at AWRE.

Mike Allaston, who joined AWRE in 1953 as an apprentice engineer, said: “The apprenticeship was brilliant, because it was so well organised –

they gave me the best training.

“Thanks to the grounding I received, and with the qualifications and skills I gained, I travelled the world with my career as a design engineer.”

Former AWRE apprentice Keith Gilbert, now an AWE Local Liaison Committee member, said there was a “great camaraderie” among the young boys in the 50s.

John Curthoys, who joined in 1954 as an electronic apprentice, said: “It was just the best apprenticeship out there. It gave me the opportunity to do so much and learn so many different practical skills. My life started at AWRE.”

Female-friendly scheme carries on its good work

AWE has seen an increase in the number of female apprentices joining the company's Skills Academy.

The work the academy has done with local schools has been credited for the increase from four female apprentices in 2013 to seven in 2014.

AWE has been supporting young people through one of the country's most successful apprenticeship schemes for more than 60 years, giving career opportunities to generations of scientists and

engineers. Our programmes have been recognised with national awards for excellence.

The proportion of female apprentices at AWE has increased from five per cent in 2013 to 15 per cent in 2014.

Last year, 45 apprentices joined AWE in roles including mechanical maintenance, precision machining, electronics, control and instrumentation, electrical maintenance and quality inspection.



AWE's 2014 apprentices with their tutors

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From left, members of Tadley First Responders, Greg Britton, Scott Schimmen, Ben England, Andy Walters and Debbie Leadbetter are presented with the cheque for £18,000 by AWE deputy managing director Rob Fletcher

Charities' Christmas bonus...

Several charities benefited from a bumper Christmas donation from AWE.

Macmillan Cancer Support and Tadley First Responders each received a donation of £18,000 from AWE's Charity Committee.

In addition to these large cash donations, AWE staff members donated more than 1.2 tonnes of non-perishable food for a local food bank.

Trevor Sleath, manager of the Andover food bank, said: “During the Christmas period, the food bank delivers more than seven tonnes of food to local people, so AWE's contribution will really help those in need.”

Tadley First Responders was announced as the 2014 AWE local charity of the year and Macmillan Cancer Support as the AWE national charity of the year.

Tadley First Responders will be using the AWE donation to buy

community-access defibrillators, which is a vital service they provide to the local area. With the donation from AWE, the group hopes to buy six more defibrillators over the next year.

Debbie Leadbetter from Tadley First Responders said: “We are overwhelmed by the amount AWE has donated and the continued support the company gives us.”



From left, AWE's Michele Maidment, Mark Suckling, Hannah Smith and Leila Broadley present more than 1.2 metric tonnes of food to the Andover food bank

CHARITYFACTS

- AWE staff raised £1,300 by baking for Breast Cancer Awareness Month
- £3,000 was raised by staff on the Macmillan Cancer Support World's Biggest Coffee Morning
- Participants in the AWE Team Challenge raised more than £20,000 for charity, £10,000 of which was donated to the Dame Kelly Holmes Trust
- AWE donated 14 pairs of safety shoes to Tadley First Responders
- The AWE Community Committee donated five Christmas stockings filled with presents for young people at Cornerstone House, Thatcham

Something special...

A team from AWE spent a day supporting a special needs school.

The team worked at Saxon Wood School in Basingstoke to ensure the school grounds are accessible by wheelchair.

Sarah Denton, the school's deputy head, was extremely pleased with the work.

"It was our pleasure to welcome volunteers from AWE to Saxon Wood for the eighth year running," said Sarah. "This year, the group was able to carry out lots of much-needed tidying of our grounds, digging out a flowerbed, cutting back hedges, painting and preserving fences, clearing paths and play areas of leaves and power-hosing slippery surfaces.

"All these jobs mean the children have a safer outside environment that looks much better and cared for. The school would like to pass on enormous thanks to all those who made the day possible as well as those who got dirty and did the tasks!"

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We're a cut above... again

AWE's construction team has been presented with a fifth Sword of Honour by the British Safety Council (BSC).

AWE was one of 50 organisations worldwide presented with a Sword of Honour, awarded to organisations which have demonstrated excellence in the management of health and safety.

Our picture shows Sarah Rooney, ESH adviser for Project Pegasus, being presented with the sword by the BSC's Neal Stone. The award was made to AWE construction projects Pegasus and Mensa.



Cash gift aids tree scheme

A £200 donation from AWE supported a tree planting initiative by the Baughurst Scouting and Guiding Associations.

The tree planting ceremony at the Baughurst Scout and Guide Den was attended by all ages from the younger beavers and rainbows to the older scouts and guides.

Jenny Foan, an external member of the AWE Community Committee, is pictured helping with the planting.



The AWE team in the grounds of Saxon Wood School