

Connect

We're keeping our neighbours informed

Important changes to local planning arrangements

This issue of *Connect* provides important information to our neighbours living and working in the emergency planning zones around the AWE Aldermaston and Burghfield sites.

What is an emergency planning zone?

The Detailed Emergency Planning Zone (DEPZ) is an area where the local authority, in this case West Berkshire Council, must put in place adequate emergency response planning arrangements to protect the public in the unlikely event of a radiation emergency. Following an assessment by AWE detailing the minimum area that each DEPZ should be, West Berkshire Council's role has been to set out the precise boundaries.

What is REPPiR?

Like all nuclear-licensed sites, AWE is subject to the Radiation Emergency Preparedness and Public Information Regulations 2019 (known as REPPiR). Updated regulations were introduced last year to strengthen Great Britain's already robust arrangements for dealing with radiological emergencies.

REPPiR public information booklet

The REPPiR booklet tells you more about the possible hazards from an emergency involving the release of radioactive material and what to do in the unlikely event of this happening.

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Find out what AWE has been doing in local schools to inspire the next generation of scientists and to mark British Science Week – a 10-day national celebration of science, technology, engineering and mathematics (read the full story on the back page). This year's theme was centred on 'Our Diverse Planet' and looked at different ways to celebrate our amazing ecological, cultural and social diversity.

REPPiR SPECIAL

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WELCOME TO THE SUMMER 2020 EDITION OF *CONNECT*, AWE'S COMMUNITY NEWS MAGAZINE.

This edition brings news of some important changes relating to emergency planning around the AWE sites at Aldermaston and Burghfield.

In May 2019, the Radiation Emergency Preparedness and Public Information Regulations (REPPiR 2019) came into effect, replacing the REPPiR 2001 regulations.

One significant change to the legislation was the need to review the Detailed Emergency Planning Zones around each site. Our lead story provides more information and advice on what to do in the unlikely event of an emergency at an AWE site.

As always, we'd welcome your views and comments, together with any ideas about future community-related content.

Finally, we wish you and your families well in these unprecedented and difficult times.

The Editor

Our community magazine *Connect* goes to thousands of homes and businesses in the local area. You can also subscribe to our e-newsletters by emailing prconsent@awe.co.uk and stating: **"I give my consent to receive news and updates from AWE."**



You can also follow us on:



@AWE_plc



@AWE_plc



[linkedin.com/company/awe](https://www.linkedin.com/company/awe)

What has changed under the new REPPiR 19 legislation?

The REPPiR 19 legislation sets new criteria for the range of weather conditions to be considered and scenarios to be included. AWE followed the legislation in applying these criteria and its technical experts calculated that the extent of the Aldermaston zone should remain unchanged at 1.5 kilometres, but there needed to be an increase in the size of the emergency planning zone for the Burghfield site from 1.5 to 3.16 kilometres. It should be noted that there is NO change to safety or risk at the AWE sites – the change is due to the calculations required under the new legislation.

What are we doing to protect you?

Every AWE facility has adequate control measures in place to prevent a radiation emergency taking place. In the unlikely event of this happening, AWE has rigorous emergency response procedures which are exercised regularly with the emergency services and local authorities. We are heavily regulated, with frequent site inspections by the Office for Nuclear Regulation (ONR). The ONR also ensures that adequate arrangements are in place for dealing with any emergency arising from AWE and its operations.

How will I be alerted in the unlikely event of a radiation emergency at an AWE site?

Every household and business in the emergency planning areas will automatically receive a pre-recorded telephone message (landline only) from the AWE Alerting System. Local radio and TV stations will also broadcast messages along with emergency responders such as the police, using news websites and social media to issue advice to the public.



The news reported in this edition of *Connect* took place before social distancing guidelines were in place.

WHAT TO DO IN THE UNLIKELY EVENT OF A RADIATION EMERGENCY

	Go in	Go indoors and follow the advice below
	Stay in	Close and stay away from all windows and doors. Damp down or put out fires and turn off any fans that could draw in air from outside
	Tune in	Tune in to local radio and TV. Advice and updates will also be given on news websites and social media
	Don't use your phone	Don't use your landline or mobile unless there is a separate emergency. This could overload the system and should be left clear for the emergency services
	Don't leave the area	Don't leave the area unless told to do so by the emergency services. You will be much safer indoors



You can find more information about the REPPiR 19 changes at <https://info.westberks.gov.uk/awe>

For further enquiries, contact the West Berkshire Council Emergency Planning team by emailing emergencyplanning@westberks.gov.uk or call **01635 503581**. You can also visit the AWE website at www.awe.co.uk



FACTFILE

- Manufacturing the warheads for the UK's nuclear deterrent and supporting nuclear threat reduction
- Government contract held by AWE Management Limited, formed of three shareholders: Lockheed Martin, Jacobs and Serco
- Established in 1987 from the merger of the Atomic Weapons Research Establishment and two Royal Ordnance Factories
- Two main locations in Berkshire: Aldermaston (750 acres) and Burghfield (225 acres)
- Large local employer with approximately 6,000 employees
- Centre of excellence for advanced research, design and manufacturing facilities
- Rated by Ofsted as an "outstanding provider" of apprenticeships
- Approximately 100 graduates and 100 apprentices recruited each year
- Strategic partnerships with five of the country's top universities
- Has an award-winning schools outreach programme, supporting science, technology, engineering and mathematics (STEM) learning for thousands of students of all ages across West Berkshire and North Hampshire
- Named as a top 25 Best Company to work for in the *Sunday Times* Best Companies Awards 2019
- Accredited Disability Confident Employer
- Visit us at www.awe.co.uk to find out more



Graduate Josiah champions equality

It's a double first for AWE graduate physicist Josiah O'Brien in his quest for gender equality. Josiah has been appointed to the WISE (Women in Science and Engineering) Young Professionals' Board (YPB) and is not only its first AWE representative, but also one of the first men to join it.



Josiah O'Brien

The YPB is responsible for developing opportunities that support WISE in its vision for gender balance in the UK's science, technology, engineering and

mathematics (STEM) workforce. It's made up of a group of diverse professionals who lead initiatives to support the next generation of STEM professionals.

This is the first year WISE has opened the YPB to men, reflecting its belief that it takes everyone to make gender equality a reality. Josiah's

appointment reflects his strong personal commitment to the principles of equality and diversity: "I think it's vital everyone has the same

opportunities afforded to them, and can achieve a career they aspire to, but this isn't available for all women," he said.

"However, together we can continue to bring about positive change within STEM fields, raising the representation of women within business and industry."

AWE's Sarah Bakewell congratulated Josiah, who joined the company's graduate programme last year.

She said: "Our aim is to create a culture where everyone becomes actively involved in promoting diversity and inclusion, not just inside but outside AWE."

Donation will help buy vital NHS equipment

We are delighted to donate £4,000 to the Hampshire Medical Fund's (HMF) Dig Deep campaign to help buy vital life-saving equipment such as ventilators used on intensive care units in the county's hospitals.

The donation comes from AWE's Charity Fund, which is set up to support local community causes.

AWE's Michele Maidment said: "We are delighted to be able to support the campaign and our fantastic NHS frontline workers at a time when help is so urgently needed."

Peter Walsh, Head of Fundraising for HMF, said: "We are immensely grateful to AWE and its employees for their amazingly generous donation to our Dig Deep emergency fundraising campaign."



Graduates displaying their super saplings

Planting a tree-mendous future

In support of the Woodland Trust's Pledge to Plant initiative, AWE's Charity Fund has bought more than 400 tree saplings. This initiative forms part of the Big Climate Fightback campaign, the pledge aimed to involve one million people in planting one million trees.

In exchange for donations to AWE charity partner Thrive, staff could choose from a range of young native tree species. The tree varieties were selected for their roles as pollinators, wildlife habitats and food sources. When AWE staff collected their saplings, members from Thrive were on hand to give advice on planting and caring for the trees.

Applauding our amazing apprentices

Earlier in the year, along with many other employers, we marked National Apprenticeship Week. This is an annual celebration of apprenticeships across England and an opportunity to recognise their successes.

Over the last 13 years, National Apprenticeship Week has brought together

apprenticeship supporters from across the country, with MPs, ambassadors, apprentices, training providers and top employers all recognising the value and importance of these schemes.

And here at AWE, we're proud to celebrate our very own wonderful apprentices and our award-winning academy... so we thought you would like to meet three of them!

Ben – Precision Engineering Apprentice

"I have had the amazing opportunity to become the chairman of the Apprentice Activity Association, which co-ordinates all the fundraising run by apprentices across our sites, and become part of some really exciting projects. I particularly enjoy the projects that involve a lot of team working."



Joe – Nuclear Engineer Degree Apprentice

"At this early stage, I am gathering a broad range of technical skills in the Skills Academy. My impression of AWE is that it is a professional and responsible organisation. The working culture is team orientated with many like-minded and talented individuals working together to achieve a common goal."



Molly – Mechanical Maintenance Apprentice

"My time at AWE has been mainly working within the academy. It has been one of the best experiences learning from instructors who have been through the apprenticeship themselves. My day-to-day work is based around the maintenance tasks I would be doing while out on site, but in a simulated environment. This is to help guide us to make sure we are doing the tasks correctly."

A proud history of service to UK's security



BY AWE HISTORIAN DR RICHARD MOORE

Britain's atomic weapons programme was established after the Second World War under William, later Lord, Penney.

He set up his HQ at Fort Halstead in Kent, but there was no space at the Fort for factory-sized labs for radioactive materials handling. The large former airfield at Aldermaston was chosen as a new site by ministers in 1949 and so, 70 years ago, at the end of March 1950, the weapons programme arrived in west Berkshire. A huge building programme followed.

Penney successfully directed Britain's first atomic test, in the Monte Bello Islands off the coast of Australia, before

moving to Aldermaston himself as Director of the new Atomic Weapons Research Establishment (AWRE) in 1953.

The first atomic bombs were delivered to the RAF at the end of the year. Driven by political and military requirements, weapons development progressed rapidly and by 1957 AWRE scientists had designed and tested a staged thermonuclear weapon or "H-bomb".

Partly because of the success of this independent work, in 1958 the US and UK signed the Mutual Defence Agreement which remains the basis of AWE's close work with the US more than 60 years later.

At the end of 1962, Prime Minister Harold Macmillan agreed with President Kennedy that Britain could buy

American Polaris submarine-launched ballistic missiles. AWRE designed and developed a new British warhead for Polaris and, in summer 1969, responsibility for Britain's strategic nuclear deterrent passed from the RAF to the Royal Navy. Since then, an unbroken series of submarine deterrent patrols has stretched for more than 50 years.

Even at the height of the cold war, AWRE didn't just develop weapons. Penney became a leading expert at nuclear arms control talks in Geneva at the end of the 1950s and began an extensive programme of work at home on seismology and other nuclear test detection techniques.

During the 1960s, future AWRE Deputy Director Frank Morgan played a leading part in designing the international



1950 Construction work began on factory-scale facilities for radioactive materials handling at the new Ministry of Supply Establishment at Aldermaston 70 years ago. Here, workers erect the steel frame for the building in which, two years later, the plutonium core will be produced for Britain's first atomic test device



Mid-1950s Britain's first atomic bomb, codenamed Blue Danube, undergoing environmental tests at the AWRE facility at Orford Ness on the east coast



1957 AWRE and Royal Navy scientists set up high-speed cameras on uninhabited Malden Island in the south Pacific for AWRE's first thermonuclear test in May



1961 AWRE's outstation at Blacknest was established as an open, unclassified facility devoted to arms control verification research

safeguards regime for nuclear materials, which now underpins a range of arms control agreements.

In the 1970s, AWRE took overall responsibility for the Chevaline programme to improve Britain's Polaris system against Soviet ballistic missile defences. This meant work on a great deal more than just warheads, and the science and engineering achievements of

Chevaline guaranteed a technically credible UK strategic deterrent in the final, tense years of the cold war.

When Trident was announced in 1980 as the successor system to Polaris, AWRE developed a new warhead and began work on significant new manufacturing facilities. Trident went into service on schedule in 1994.

Meanwhile, big management changes had been made. In 1987, AWRE took responsibility for the manufacturing work of the Royal Ordnance Factories at Burghfield and Cardiff. To mark this change, the "R" for Research was dropped and

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1960s A dummy Yellow Sun megaton free-fall bomb being tested with an RAF Victor bomber. RAF Bomber Command maintained Britain's strategic nuclear deterrent using weapons designed and developed by AWRE and assembled at the Royal Ordnance Factory at Burghfield until 1969

Seventy years of service

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AWRE became AWE. In 1993, AWE became a government-owned, contractor-operated business.

When the UK ratified the Comprehensive Test Ban Treaty in 1996, AWE faced the challenge of assuring the safety and performance of Britain's nuclear weapons and, if necessary, designing new weapons in future, without full-scale nuclear testing. New investment in pure science, modelling and simulation capabilities followed.

AWE's experts have also been called upon to counter terrorist and other 21st-century threats, for example



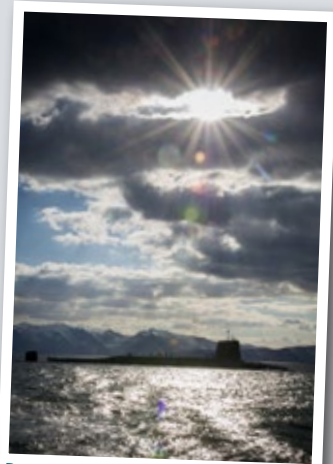
1979 Her Majesty the Queen during her Aldermaston visit to open the HELEN high-energy laser facility. Project leader John Weale explains the laser's target chamber

advising on the Litvinenko investigation in 2006 and safety at the London 2012 Olympics. In February 2020, the government announced work on a replacement warhead for the Royal Navy's new Dreadnought-class submarines.

We are proud of our contribution towards maintaining the UK's ultimate security over the past 70 years and look forward to continuing our role as safe and effective stewards of the UK warhead stockpile and trusted advisers on nuclear security in the coming years and decades.



Mid-1980s The Aldermaston site in the mid-1980s. New facilities for the Trident warhead programme are taking shape in the centre of the picture, making the triangular layout of the old airfield runways harder to make out



Present day The Royal Navy Trident submarine *HMS Victorious* carries warheads designed, built and maintained by AWE. With her three sister boats, *Victorious* maintains a series of deterrent patrols unbroken since 1969

Grace Green, left, and Marie Llewellyn from the Home-Start charity



Isolated families to benefit from donation

The practical and emotional support provided by Home-Start in West Berkshire received a financial boost from AWE's Charity Fund. The £5,000 donation is going towards the charity's Isolated Families project – which aims to reduce the impact isolation can have on families with young children in West Berkshire.

Families are visited by Home-Start volunteers who have completed an

accredited training programme to equip them with the tools they need to support vulnerable families.

One parent supported by Home-Start West Berkshire said: "Home-Start helped me with the foodbank when I lost my job and helped me to learn about meals I could cook at home. It has also helped me to make new friends and get to know people in the community."

Award-winning team proves top Quality

Our specialist Quality team has won the Team of the Year accolade at the Chartered Quality Institute's (CQI) International Quality Awards, which celebrate excellence in the professional

quality management sector.

The Quality team beat off competition from 26 international entries in a section where judges described the standard of submissions as "exceptionally high".

Receiving the award on behalf of the company, Stephen Hughes said: "This award recognises the daily activities, actions and contributions made by everybody to ensure and assure quality across AWE."

This achievement follows hot on the heels of success at the Ministry of Defence (MoD) Quality Awards, when AWE teams and individuals won four awards, including the overall Gold Award for Steve Bagnall.



The AWE Quality team

Partnership is thriving

AWE will continue to support its charity partner Thrive, with fundraising over the coming year. Thrive, based in Reading, uses gardening to bring about positive changes in the lives of people living with disabilities or ill health, or who are isolated, disadvantaged or vulnerable.

Trained horticultural therapists at the charity work with clients so they can enjoy the health benefits that gardening, horticulture and spending time with nature can bring.



Working on the allotment

Thrive supports and works with a wide range of people who have a physical or learning disability, mental health support needs, sensory loss or autism and age-related conditions – and young people who have social, emotional or behavioural difficulties.

Several AWE teams have volunteered their time over the last two years, helping with outdoor jobs such as digging, weeding, strimming and clearing the ponds.

Sue, who works at Thrive, said: “AWE volunteers have made a big difference, which will enhance our clients’ enjoyment of the garden.”

Over the last two years, AWE has donated £43,000 to Thrive, plus £1,020 was raised through the Pledge to Plant campaign and £65 through toner recycling. We’re looking forward to carrying on supporting the invaluable work done by this charity.



Potting up in the glasshouse at Thrive

Proactive work earns disability recognition

We’re continually working hard to make AWE a truly inclusive workplace for everyone. That’s why we’re thrilled to have become an accredited Disability Confident Employer – which means recognition by the government’s Disability Confident scheme for our proactive work in making sure disabled people get a fair chance.

In the UK, 7.6 million



people of working age have a disability and the scheme helps employers recruit and retain people from the widest possible pool of talent. More than 15,000 organisations have already signed up to the scheme which is run by the

Department for Work and Pensions.

Dave Chambers, AWE’s Executive sponsor of the Disability and Neurodiversity Working Group, said: “We want to get the best from every team and every individual. We already have a number of great initiatives in place, but going through this process has also made us think about what else needs to be done.”

Safety campaign is streets ahead

AWE marked Road Safety Week by supporting local schools with their awareness-raising campaigns, all themed with “Step up for Safe Streets.”

We donated junior road safety kits and fluorescent high visibility vests to local primary schools to support the valuable work they are doing to keep their pupils safe.

Brimpton Primary School, Reading, also got a helping hand from the AWE Charity Fund. The safety railings outside the school gate and road markings at the entrance to the school needed a lick of paint.

Head teacher Heidi Davies said: “We are very grateful for the help of the AWE Charity Fund, which enabled the school to get the safety railing repainted – helping keep the children and local community safe on this busy road.”



Pupils admire the newly painted safety railings

Green-fingered graduates

Great partnership working has seen the science garden at Queen Mary's College in Basingstoke positively bloom.

A group of our graduates, taking part in a project management challenge, approached the college and offered to help revamp the area which is used for science lessons by hundreds of students.

This open area supports multiple primary school pupils who use the College's Science Centre, as well as being used by the college's own post-16 students.

The AWE team sourced bark and the heavy labour skills of its supplier Mitie, along with plant and material donations from the company's Charity Fund.

The area was transformed with bark ground



Before, above, and after... the QMC science garden

coverage and three separate flat beds – for planting vegetables, herbs and wildflowers – along with a bee corridor and lavender hedges to protect the revamped greenhouse. The beds also provide sensory therapy for several Special Educational Need (SEN) pupils who visit the garden.



An AWE team running a workshop for primary pupils with our partner Queen Mary's College

We're helping to celebrate science

Science was celebrated in our local schools during March's British Science Week.

We worked in partnership with local schools and the Royal Institution to support the delivery of science demonstrations to nearly 1,000 students, teachers and parents. Hundreds of primary pupils in Basingstoke enjoyed fun science demonstrations by our STEM Ambassadors, based on this year's theme, "Our Diverse Planet."

AWE supports its people to take part in the national STEM Ambassador scheme – which helps to spread the word about how exciting it is to be a scientist.

AWE's Community

Engagement Manager Philippa Kent said: "We give our teams special leave to get involved in going out to schools as part of the national scheme run by STEM Learning."

AWE also sponsored activities at local secondary school, The Hurst Community College. Four shows took place – enabling around 700 people to get involved – to launch our British Science week support.

Alongside our support for British Science Week, AWE has an ongoing programme and partnerships to help thousands of young people of all ages take part in science. Groups of our scientists and engineers work closely with schools and educational charities to deliver

workshops, challenges, events and mentoring across North Hampshire and West Berkshire.

We also work in partnership with Queen Mary's College, Basingstoke, to support its Science Centre, which delivers sessions every week to local primary school pupils. Since we started sponsoring the centre in September 2019, around 2,000 young people have benefited from free science sessions and free transport on the AWE sponsored minibus. Up to 4,000 young people use the facility each year.

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