

**14-18 JULY 2025, LONDON**

# **Women in Nuclear Global** 32nd Annual Conference 2025

Hosted by WiN UK  
**WiN Global Technical Tours**



This tour at the Culham Campus offers a rare and exciting opportunity to witness firsthand the groundbreaking work being done in fusion energy by the UK Atomic Energy Authority (UKAEA).

#### UKAEA Tour Route and Schedule

Start	End	Description/Groups	
07.30	10.00	Bus leaves 07.45. Travel to Site, estimated journey duration 1.5 hours, traffic dependent.	
10.00	11.00	Arrival at site (E3). Introductory talk	
11.00	12.00	<b>Group 1</b> Control Room Gallery Remote Handling Assembly Hall – Doors Assembly Room - IVTF	<b>Group 2</b> Assembly Room - IVTF Assembly Hall – Doors Remote Handling Control Room Gallery
		<b>Group 3</b> Remote Handling Control Room Gallery Assembly Room - IVTF Assembly Hall – Doors	<b>Group 4</b> Assembly Room - IVTF Assembly Hall – Doors Control Room Gallery Remote Handling
12.00	13.00	Lunch	
13.00	13.45	Tour of MAST – U	
13.45	14.15	Tour of MRF	
14.15	14.30	Walk to RACE	
14.30	15.00	Tour of RACE from reception	
15.00	17.30	Tour ends and go to buses for return journey back to London	

We'll start the day with an engaging talk about the basics of fusion energy, including its potential to provide a sustainable, low-carbon energy source for the future.

The tour of the facilities will then commence:

1

**Joint European Torus (JET):**

The world record breaking (JET) which was designed to study fusion in conditions approaching those needed for a power plant.

2

**MAST Upgrade:**

The UK's flagship fusion experiment, MAST Upgrade, which is tackling one of fusion's major challenges - plasma exhaust - and will contribute to the design of future fusion machines, such as STEP.

3

**Remote Applications in Challenging Environments (RACE):**

The cutting edge RACE facility, where UKAEA design, operate and deliver robotics for extreme industrial environments, working towards their end goal of bringing fusion energy to the grid.

4

**Materials Research Facility (MRF):**

The MRF laboratory at Culham is for UK nuclear researchers – both in fusion and fission – to study the materials needed for the reactors of the future. MRF is part of the UK Government's National Nuclear User Facility and the Henry Royce Institute for advanced materials.

**Interactive Experience with Experts**

These tours will be led by engineers, scientists and technicians, who are currently working on the experiments – so you are guaranteed a genuine insight into fusion research and have the opportunity to directly ask our passionate researchers anything about work undertaken at UKAEA.

Whether you're a student, professional, or simply curious about the future of energy, this tour will give you an unparalleled view of the UK's cutting-edge efforts in fusion research.

For more details, you can visit the UKAEA's website for further information on their work and research at the [Culham Centre for Fusion Energy](#)

Lunch and refreshments are kindly provided by our sponsoring organisation, United Kingdom Atomic Energy Authority (UKAEA).

# Harwell Park Campus



Reminder – all attendees will need to bring photographic ID (passport or driving license)

This tour will showcase some of the organisations contributing to the UK nuclear endeavour through developing research and technology. This tour will enable you to see both current advancements in research and technology and to reflect on historic facilities and the legacy they delivered.

## Agenda:

Start	End	Description/Groups	
6.30	9.00	Coaches depart 6.45. Travel to Site	
9.00	10.00	Arrival at Building 150 Refreshments. VR demonstration	
10.00	12.30	<b>Group 1</b> NRS DIDO & PLUTO (via Coach to buildings)	<b>Group 2</b> Sub Group A: Diamond then ISIS Sub Group B: ISIS then Diamond
12.30	14.00	Lunch – Building 150	
14.00	16.30	<b>Group 1</b> Sub Group A: Diamond then ISIS Sub Group B: ISIS then Diamond	<b>Group 2</b> NRS DIDO & PLUTO (via Coach to buildings)
16.30	19.00	Tour ends and go to buses for return journey back to London ETA at hotel -	



This tour provides a fascinating opportunity to explore cutting-edge nuclear science and technology, as well as the legacy of the UK's pioneering nuclear research. Here's an overview of the special features you'll see during the tour:

1

#### **Nuclear Waste Services (NWS)**

Learn about the critical role of NWS in managing the safe disposal and storage of radioactive waste. This includes efforts around the long-term geological disposal of waste.

See visualisations and experience through Virtual Reality headsets what a future Geological Disposal Facility for radioactive waste might look like.

2

#### **Diamond Light Source**

The Diamond Light Source is a state-of-the-art research facility that acts like a giant microscope, generating intense beams of light using electrons. These beams allow scientists to investigate materials at a microscopic level.

Visit a Beam Line: You'll have the chance to visit one of the beam lines where research is being conducted. Scientists use the bright light produced by Diamond to study everything from fossils to jet engines, and even complex viruses and vaccines.

3

#### **ISIS Neutron and Muon Source**

ISIS is one of the leading facilities for neutron and muon research. Neutrons and muons are subatomic particles that allow scientists to study the structure of materials at the atomic level, providing insights into everything from engineering materials to biological processes.

The facility's instruments, known as super-microscopes, are specialised to study different types of matter using neutron and muon beams. These non-destructive experiments can reveal information that would be impossible to uncover with traditional techniques.

# 4

## **Nuclear Restoration Services**

Visit two decommissioned reactors that were originally part of the UKAEA's research efforts at Harwell. These are part of the Nuclear Restoration Services efforts to manage the legacy of the UK's nuclear research.

- PLUTO Reactor: The PLUTO reactor was a high-flux reactor developed by UKAEA at Harwell and commissioned in 1957. It operated for 33 years before being decommissioned in 1990.
- DIDO Reactor: Another of the early reactors, DIDO was the prototype of PLUTO and also played a key role in developing reactor technology that many countries used for their own materials testing reactors.

PLUTO and DIDO were located at Harwell; the third, Dounreay (DMTR) was built in Caithness, Scotland. The development of multi-purpose type PLUTO reactors gave rise to many countries building their own materials testing reactors based on DIDO's design.

This tour will give you an in-depth look at both the history and future of nuclear technology and research, along with opportunities to see firsthand some of the most advanced scientific techniques and infrastructure in the world today.

Lunch and refreshments are kindly provided by our sponsoring organisation, Nuclear Waste Services (NWS).

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# Science Museum

Volunteers will be able to escort people from the Park Plaza Hotel to the Science museum; this will be using the London Tube system. For anyone wishing to be escorted, please meet in the Park Plaza Foyer by 8am. From here, we will walk across Westminster Bridge to the Westminster Tube station, where we will catch either the Circle (yellow) or District (Green) Line to South Kensington at ~8.45am; the tube ride will take ~25 minutes. Both tube stations have step-free access; please make it known to your host if you have any accessibility concerns so we can ensure you are directed to the appropriate entrance / exit. You will need to use a contactless payment card to tap in / tap out at the ticket booths at each station. When we arrive at South Kensington, we will follow signs for Exhibition Road; from here, we will walk a short distance up Exhibition Road to the Science Museum entrance.

For those who wish to make their own way, please arrive outside the Science Museum entrance on Exhibition Road by 9.30am for registration and ticket allocations. Entrance to the museum will be granted at 10am.

This is a self-guided tour and there are many galleries to choose from; some of the exciting galleries are listed below, but this is not an exhaustive list. Suggested times for each gallery are provided, but please feel free to explore the museum at your own pace, in whatever order you wish. Our WiN Global Conference volunteers will be on site to answer any questions you have or provide support if needed.

Lunch and refreshments are available to purchase on site in the cafés, which are available on every floor. Alternatively, you are welcome to bring your own food and eat in the designated picnic areas on Level 1 or 2. There is also a gift shop should you wish to buy a souvenir of your visit.

[Information sourced from the Science Museum Website](#)

## Level 0



45 minutes



### Exploring Space Gallery

– From rockets to satellites, probes to landers, this unforgettable gallery allows visitors to experience the astounding scientific and technological innovations that have made space exploration possible.

## Level 1



30 minutes



### Engineers Gallery

– Celebrating engineers and how they shape the world we live in, through surgical robots, controlled drug delivery, the first digital camera, digital technologies and the power of creativity.

## Level 2



45 minutes



### Energy Revolution Gallery

– Discover how the world can generate and use energy more sustainably to limit climate change in this brand new gallery. This gallery contains three sections: Future planet (the climate change we are experiencing and future predictions based on decisions made today), Future Energy (the technologies that are reimagining how energy is supplied and used today), Our Future (an interactive imagining of how the world will meet their future energy needs).

## Level 2



45 minutes



### Information Age Gallery

– Celebrating more than 200 years of innovation in information and communication technologies. Find out about the science of communication and information networks and how users and inventors have influenced new technologies.

## Level 2



45 minutes



### Mathematics Gallery

– This bold and thought provoking gallery examines the fundamental role mathematicians, their tools and ideas, have played in building the world we live in. Including stories from salespeople to sailors, aircraft engineers to bankers, and gamblers to garden designers.

## Level 3



45 minutes



### Science City Gallery

– Discover how London grew from a lively capital city to a global hub for trade, commerce and scientific enquiry between 1550 and 1800. This was through the search for new ideas, knowledge and practical techniques, with collections focusing on experimentation and precision measurements.