Notice: IP6 0AG, Binder Limited: environmental permit issued

The Environment Agency publish permits that they issue under the Industrial Emissions Directive (IED).

This decision includes the permit and decision document for:

- Operator name: Binder Limited
- Installation name: Progress Works Treatment Facility
- Permit number: EPR/RP3536SW/V004

Notice: M41 7JB, United Utilities Water Limited: environmental permit issued

The Environment Agency publish permits that they issue under the Industrial Emissions Directive (IED).

This decision includes the permit and decision document for:

- Operator name: United Utilities Water Limited
- Installation name: Davyhulme Wastewater Treatment Works – Sludge Treatment Facility
- Permit number: EPR/HP3931LJ/V010

Notice: GL2 5LF, Severn Trent Water Limited: environmental permit issued

The Environment Agency publish permits that they issue under the Industrial Emissions Directive (IED).

This decision includes the permit and decision document for:

- Operator name: Severn Trent Water Limited
- Installation name: Netheridge Sewage Treatment Plant

- Permit number: EPR/HP3095CT/V003

News story: £3 million Dragon's Den style competition shortlists ideas to clean up old nuclear plants

The shortlisted entries, many of which come from companies that have never worked in the nuclear industry before, now have around 3 months to develop their ideas for a chance to move on to the next stage. They'll start fleshing out their concepts on how to safely dismantle a large number of highly radioactive rooms or 'cells' at Europe's most complex nuclear site, Sellafield in Cumbria.

Melanie Brownridge, the Nuclear Decommissioning Authority's (NDA) Head of Technology, said:

> This competition is an amazing opportunity for creative, forward-thinking and innovative companies to collaborate and come up with cutting-edge solutions for cleaning up some of the UK's most complex nuclear sites.

The competition, which is being run by the NDA, and the UK government's innovation agency, Innovate UK, is awarding an initial £750,000 to a shortlist of 15 newly formed consortia to help them develop their ideas. Full details remain under commercial wraps but more will be revealed when the winners are picked at the end of the year and begin to build prototypes, supported by the remaining funds.

Shortlisted entries

Lead contractor	Project title
A.N. Technology Ltd	A Flexible Measurement and Waste Led, Robotics-Based Decommissioning Project
Amec Foster Wheeler	Integrated Innovation for Nuclear Decommissioning
Barrnon Ltd	Barrnon Integrated Decommissioning System
Cavendish Nuclear Ltd	Sellafield In-Cell Decommissioning System (SIDS)
Costain Oil, Gas and Process Ltd	Stabilisation, Excavation and Segregation
Createc	Elephants to Ants: Innovation in Integration

Lead contractor	Project title
Davy Markham Limited	Integrated & Transferable Decommissioning Toolkit
Eadon Consulting Limited	Versatile Decommissioning System (VDS)
James Fisher Nuclear Limited	Hot Hatch Cell Recovery
MDA Space & Robotics Ltd	DecomSmart
Nuvia Limited	Nu-Decom
Oliver Crispin Robotics Ltd	LaserSnake++
Rovtech Solutions Ltd	Integrated Keyhole Remote Decommissioning System
University of the West of England	Integrated robotic system for characterisation and decommissioning
Westinghouse Electric Company UK Limited	Integrated Innovation for Nuclear Decommissioning

Over the next few years several major plants at Sellafield will come to the end of their operational life, such as the Thermal Oxide Reprocessing Plant (THORP) and Magnox Reprocessing Plants, which are used to reprocess spent nuclear fuel from power stations across the UK and the rest of the world.

This will mark the start of an important decommissioning challenge to deal with a number of highly radioactive ‘cells’ containing a complex network of contaminated pipes, vessels and several miles of steelwork.
The competition set out to find and fund technology that will clean up the ‘cells’ as safely, quickly and cost-effectively as possible whilst minimising risks to the workforce.

The winning technologies will need to find ways of safely accessing the cells, surveying the contents, cleaning them out and putting the radioactive waste into packages for safe storage. The proposals feature the use of leading-edge technologies such as artificial intelligence, virtual reality, robots, drones, lasers and specialised remote sensors and detectors.

Although initially focused on Sellafield, the winning ideas could be used to clean up the other nuclear sites owned by the NDA, which date back to the earliest days of the UK nuclear industry.

Melanie added:

> The NDA is continually seeking the best ways to encourage new ideas from the supply chain and ensure everyone has an opportunity to get involved. The response we have had to this competition has been fantastic. We’ve been really impressed by the standard of proposals and the healthy numbers of applicants.
>
> I’m also extremely encouraged by the high level of interest from organisations outside the nuclear sector, offering highly innovative solutions from industries such as the oil and gas sector, defence industries and even space exploration.

Derek Allen, Innovation Lead at Innovate UK, said:

> We are delighted to be working again with the NDA as they continue to support innovation to deliver their programme.
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> We are looking forward to seeing the integration and demonstration of some of these technologies that will ultimately lead to safer, faster, cheaper nuclear decommissioning. This has the potential to open up significant business opportunities for UK organisations both nationally and globally.

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