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Veolia UK supports first full civil nuclear reactor decommissioning with Imperial College London

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Veolia, world leader in hazardous waste management, has supported Imperial College London to successfully decommission the Reactor Centre at Imperial's Silwood Park eco-campus in Ascot, Berkshire, making it the first civil nuclear site in the UK to achieve this status.

Following the ten year project to safely dismantle the facility, the Office for Nuclear Regulation has now been able to end the requirement for regulatory controls, making it safe for the public. This complex demolition and land remediation work has returned the site to its original safe state, which now provides a playing field for students and staff.

After being operational for almost 50 years, the site housing the UK's last civilian nuclear research reactor closed in 2012, having played a vital role in the UK nuclear research programme. Veolia specialist decommissioning team, KDC, initially supported the team at Imperial to plan the complex project which included the cutting operations to reduce the reactor concrete shielding, removal and demolition of the facility.

Innovation was key to the successful decommissioning of the site and required the design and use of new equipment to safely deconstruct the facility. As the reactor core required a bespoke design to release the submerged core support structure (CSS) Imperial and Veolia KDC specialists used custom built extended reach tooling, assisted by a submersible camera, to operate 3.5 metres below the waterline. Removing the reactor circuit pipelines released the support structure, and the stainless steel elements were then carefully handled to maintain radiation readings below the minimum safety level. The structure was then

transferred directly out of the reactor vessel and into a concrete shielding block handling cell, where it was dismantled.

Other operations to support the project included constructing a ventilated enclosure around the area to allow removal of the reactor block, which formed the bioshield for the core. Safe management of asbestos waste was done by Veolia's CAT B trained operatives that removed the asbestos floor tiles, cement sheeting, asbestos gaskets, ACM fire doors and textured coatings.

After removal of the reactor infrastructure, demolition of the rest of the site was then completed, with the waste materials transported for further specialist processing and treatment, and the land restored.

John Abraham, Chief Operating Officer – Industrial, Water & Energy for UK, Ireland and Nordics said: *"This project is a perfect example of Veolia's collaborative, innovative and safety-focused approach to complex projects, demonstrating the results that can be achieved through combined expertise. Restoring this space to a safe green area which can be returned to public use further highlights how we can contribute to depollution and regeneration."*