

# Collaborative Research Programme in Decommissioning, Immobilisation and Storage Solutions for Nuclear Waste Inventories (DISTINCTIVE)

- EP/L014041/1, £4.91M EPSRC, started 10 Feb 2014 to 9 Feb 2018
- Total £6.13M (10 PDRA) + £2.23M industry (21 PhD + active facilities) = £8.36M
- *Objectives:*
- Carry out internationally leading research in area of decommissioning and nuclear waste management
- Support research that provides routes to innovative technology developments
- Foster and develop new multi-disciplinary research partnerships between academic and industry researchers
- Train next generation of UK researchers, with relevant skills and experiences
- Provide focal point for government, industry and academics for discussion of current and future R&D issues
- Provide route for public understanding of underlying R&D needs, opportunities and solutions

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## ● *Key Issues:*

- Strong industrial support from NNL, NDA and Sellafield Ltd: strategic guidance; challenge definition; engaged during consortium building; proposals reviewed and ranked; scholarship/in-kind industry support greater than typically offered
- Industry engaged in delivery: further development of project scopes; one or more industry supervisors per project
- Partnership in delivery: embedding 2 PDRAs in joint industry-academic team at active facilities; other planned secondments to active labs or plant
- Inclusive in industry engagement: International Advisory Group; general support to date from BAM Ritchies, Environment Agency, MMI Engineering, Nuclear Technologies, PNNL, SRNL, US DOE with others contacted
- In line with Nuclear Industrial Strategy, and NDA and EPSRC strategies: joined up approach to nuclear R&D across government, industry and academia; benefit to economy and security of supply; establish UK industry as global leader
- Members of consortium already have extensive international links

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## ● *Work Packages/Themes*

- AGR, Magnox and Exotic Spent Fuels (Lead: Tom Scott/Nick Evans)
  - 8 projects: Wet fuel storage; Transition to dry fuel storage; Long-term storage effects and exotic fuels
- PuO<sub>2</sub> and Fuel Residues (Lead: Colin Boxall/Neil Hyatt/Nik Kaltsoyannis)
  - 8 projects: PuO<sub>2</sub> in interim storage; Pu-bearing wastefoms/encapsulants; Characterisation stored Pu, Pu-contaminated materials and facilities
- Legacy Ponds and Silo Wastes (Lead: Joe Hriljac/Bill Lee)
  - 8 projects: Wasteform durability; Effluent treatment/analysis; Pond and silo sludges
- Structural Integrity (Lead: Becky Lunn)
  - 6 projects: Physical ground barriers for contaminant containment; Remote crack detection, infrastructure health and building preservation; Real-time management of autonomous systems for decommissioning

## ● *Cross-Cutting Activities:*

- Active Research Projects (Lead: Simon Pimblott)
- Impact, Outreach and Public Engagement (Lead: Neil Hyatt)

## ● *Meetings:*

- Industrial Road Show 25 November 2014
- Work Package meetings October/November 2014
- Annual Conference 15-16 April 2015

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