



Office for
Nuclear Regulation

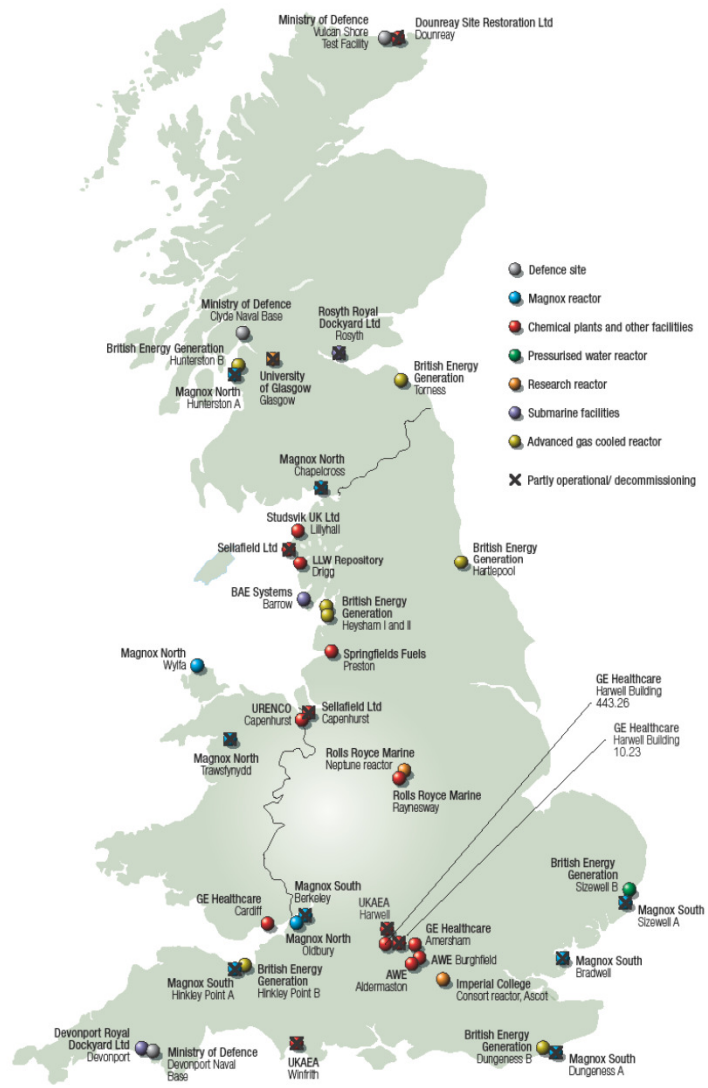
**On-Site Storage and Regulation of
Radioactive Waste Management
NuLeAF seminar**

Local Government House, London
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Presentation Structure

- Regulatory Framework
- Regulatory Expectations
- Current issues
 - Hazard and risk reduction
 - Legacy Facilities
 - Materials Consolidation
 - Safe Management of Nuclear Materials
 - Land Quality Management
 - Geological Disposal
 - Generic Design Assessment and New Build

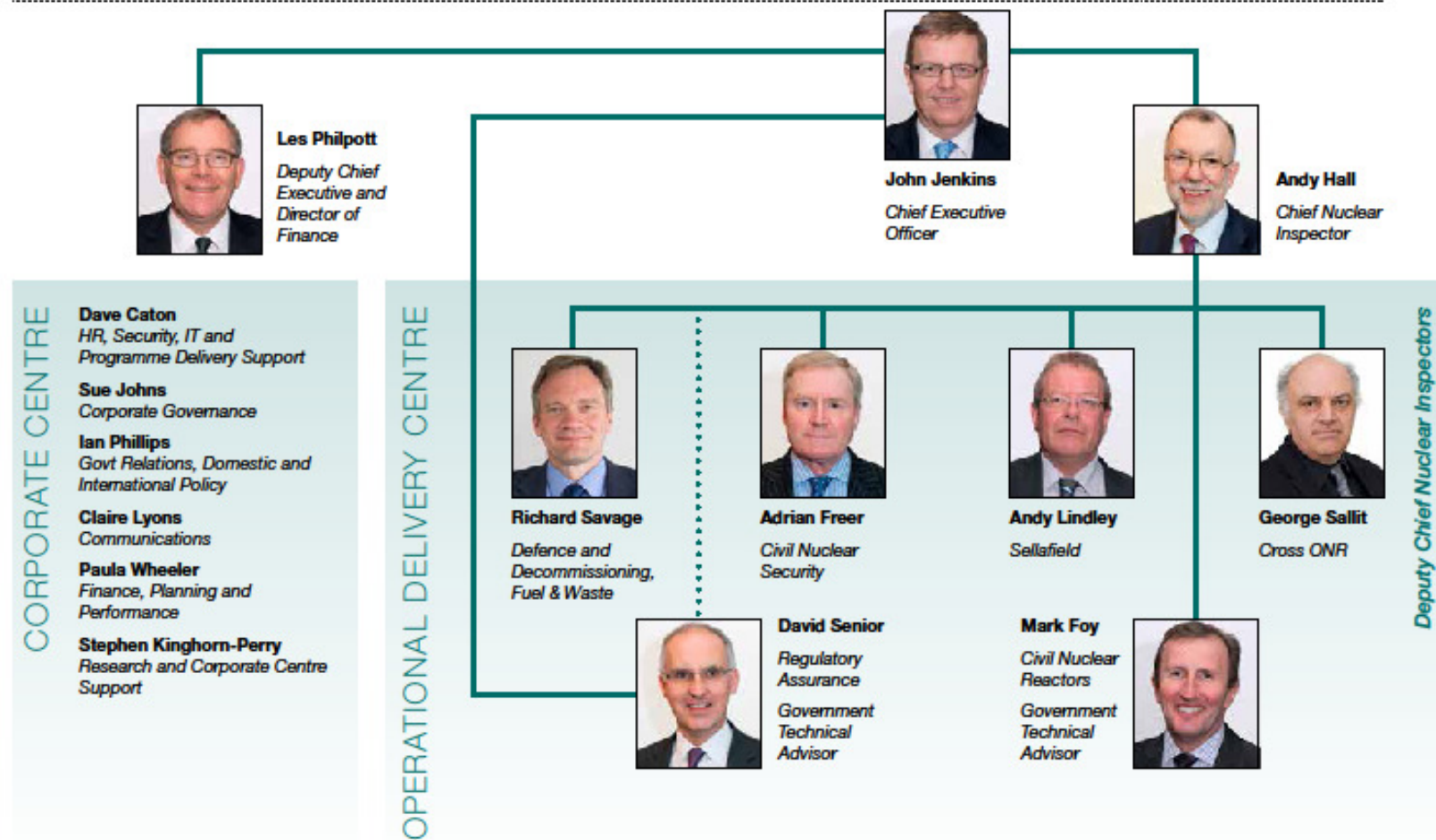


Introduction to ONR

- ONR became a public corporation on 1 April 2014.
- ONR:
 - regulates nuclear safety, security and transport of radioactive materials
 - supports regulation of Safeguards by Euratom
- ONR's mission is “to provide efficient and effective regulation of the nuclear industry, holding it to account on behalf of the public”



ONR Organisational Structure



Regulator's Objectives

- Compliance with the law
- Safe and secure
- Hazard and risk reduction
- Minimise radioactive waste generation and discharges
- Minimise off-site risks – including during waste transport
- Security of nuclear material and sensitive nuclear information
- Efficient, effective regulation

UK regulatory framework for safety

- Key laws in regulation of the safety of the UK nuclear industry:
 - **Health and Safety at Work etc. Act 1974**
 - **Energy Act 2013**
 - Nuclear Installations Act 1965

Nuclear Installations Act 1965

- ONR responsible for regulation of safety AND radioactive waste management on the licensed site through Licence Conditions
- ONR does NOT regulate disposal of radioactive wastes on or from nuclear sites
(Environment Agencies)

ONR Legal Requirements

- Adequate nuclear material, spent and legacy fuel and radioactive waste management arrangements
- Adequate decommissioning arrangements
- Adequate land quality management arrangements

Overview of UK Regulatory Framework for nuclear safety – key aspects

- Permissioning regime
- Safety case
- Safety Assessment Principles (SAPs)
- Reducing risks “so far as is reasonably practicable”
- “Goal-setting”

ONR Expectations

- Safety Assessment Principles (and supporting guidance taking into account international standards and good practice e.g. IAEA and WENRA)
- International Peer Review
- Joint Guidance (ONR and Environment Agencies) 'Management of Higher Activity Waste on Nuclear Licensed Sites'
 - Regulatory Process
 - Radioactive Waste Management Cases (Integrated Waste Strategies)
 - Waste Minimisation, characterisation, segregation
 - Conditioning and Disposability
 - Storage
 - Information and Records

Legacy Facilities – Hazard and Risk Reduction

- Past nuclear liabilities:
 - Uncertain inventory
 - Do not meet modern standards
 - Ageing facilities
 - Not initially designed to facilitate retrieval

- **Regulatory focus on interim safe passive storage of radioactive waste**





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Materials Consolidation

- Integrated Waste Management Multi-Site Approach for re-locating spent fuel and radwaste
- ONR Project Management Regulatory Approach
 - Safety, Security, Transport, Safeguards
 - Environment Agencies
 - Support and encourage stakeholder engagement

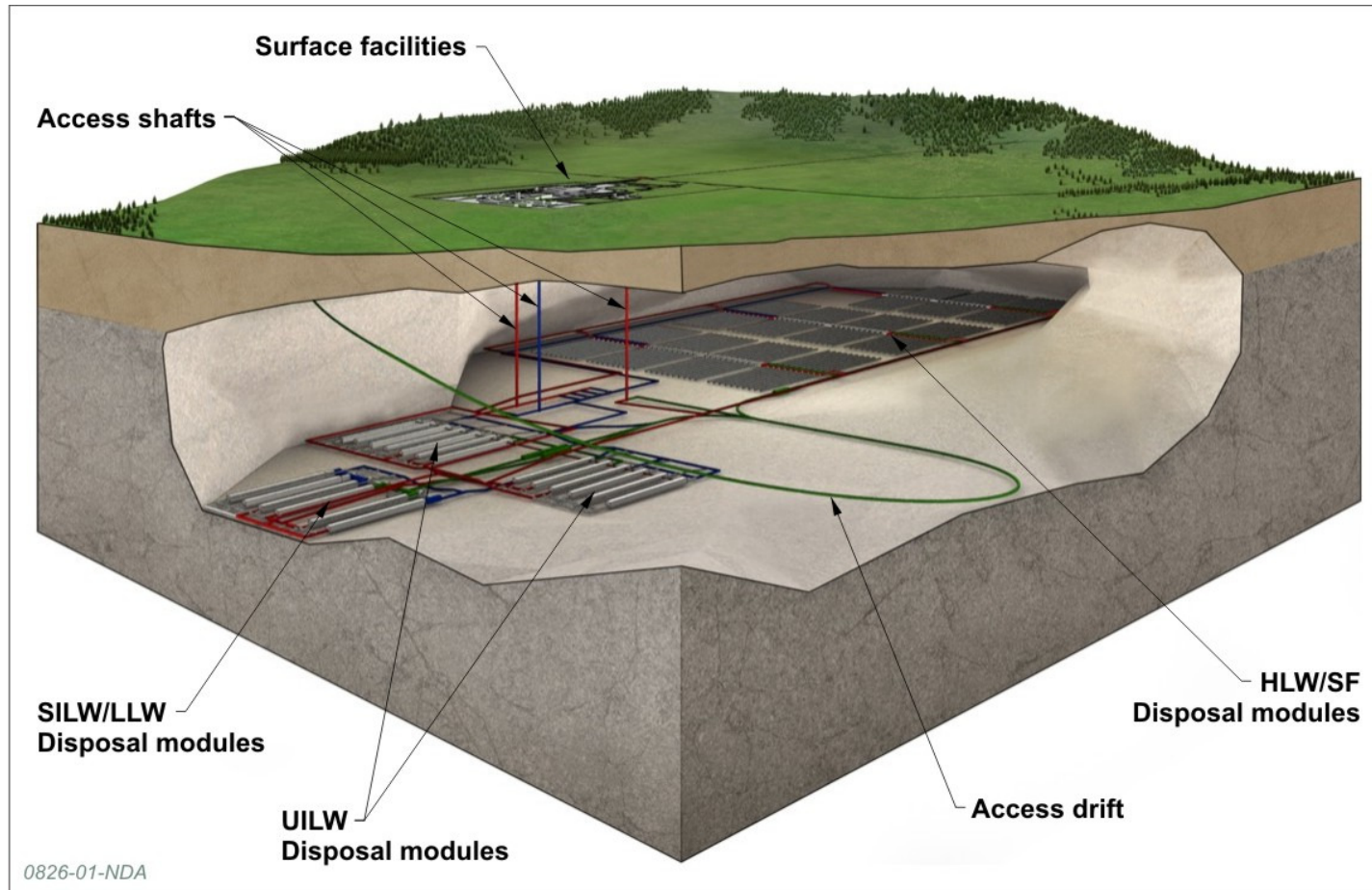
Safe Management of Nuclear Materials

- Safe Storage – Spent Fuel and other Nuclear Materials
- Current strategy for UK plutonium is safe and secure storage until 2100
- Consolidation of packages from older stores across Sellafield and from Dounreay
- Long-Term Plutonium Management Options (‘Disposition’)
 - Developing Regulatory approach
 - Advising NDA of licensing requirements for options in support of Government policy decisions

Land Quality Management

- Joint Regulators' Working Group
- Strategy and implementation plan involving stakeholders
- Take all reasonably practicable measures to prevent contamination and manage existing contamination to mitigate safety and environmental risks for present and future generations
- Understand the characteristics of any contamination
- Where reasonably practicable, remediate existing contamination, or apply controls

Geological Disposal Facility (GDF)



GDF - ONR Prioritised Efforts

- Support Managing Radioactive Waste Safely (MRWS) Process
- Licensability
- Evaluate relevance of current ONR standards, guidance and licence conditions to geological disposal

Disposability

- RWM Ltd - prospective Geological Disposal Facility operator
- ONR influenced RWM Ltd creation as wholly owned subsidiary of Nuclear Decommissioning Authority
- RWM Ltd Letter of Compliance (LoC) provides confidence on disposability
- EA & SEPA undertake disposability assessments of waste management proposals

Joint Regulators Inspection of RWM

- EA & ONR inspection of RWM LoC Process 2013
- Disposability assessment process generally robust
- Recommendations for improvements (e.g. periodic reviews, records, scheduling & prioritisation)

Generic Design Assessment and New Build

- Reactors, Chemical Plants and Stores
- Radioactive waste, nuclear materials management and decommissioning considered at outset to minimise future legacy

Summary

- Manage existing legacies safely and securely
 - Hazard and risk reduction
 - Safe passive interim storage pending disposal
- Minimise new legacies
 - GDA and new build assessments
 - Disposability assessments
- Geological Disposal Facility
- Regulation has come a long way. It will continue to develop to meet long-term challenges