

Radioactive Waste Disposal in the UK

Cherry Tweed

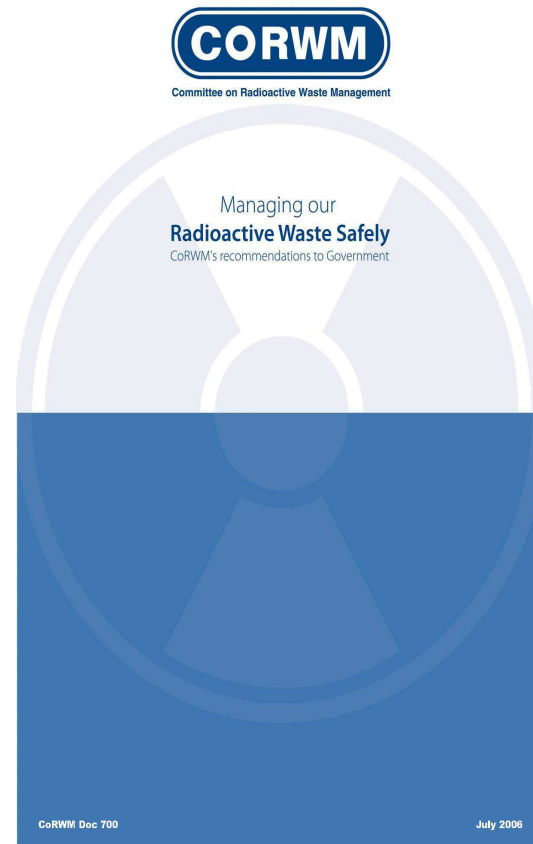


Context

- **Managing Radioactive Waste Safely (MRWS) consultation programme started 2001**
- **Committee on Radioactive Waste Management (CoRWM) in 2003**
- **Energy Act 2004 established Nuclear Decommissioning Authority (NDA)**

CoRWM's recommendations

- **Published July 2006**
 - **after significant public and stakeholder engagement**
 - **15 recommendations**
- **Geological disposal**
- **Interim storage**
- **Voluntarism and partnership approach**



Government's response

- **Defra and Devolved Administrations**

- **responded October 2006**

- **Accepted recommendations**

- **NDA to implement**

- **Nirex to be integrated into the NDA**

- **maintain skills and experience**

www.defra.gov.uk

Response to the Report and Recommendations from the Committee on Radioactive Waste Management (CoRWM)

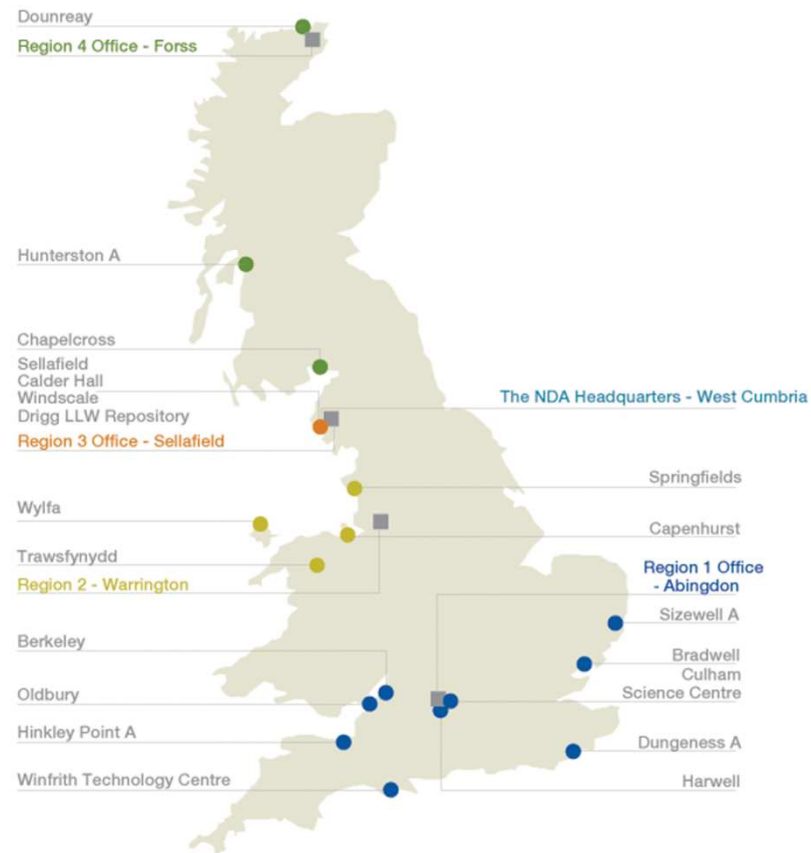
By the UK Government and the devolved administrations



NDA

The NDA

- **Non-Departmental Public Body established in April 2005**
- **Remit to clean up the civil public sector nuclear legacy**
- **Sites and facilities built from 1940's onwards**
- **Annual funding of ~£2.8Bn**
- **Based in West Cumbria**
- **Responsible for 20 former UKAEA and BNFL sites & integrated waste strategy**

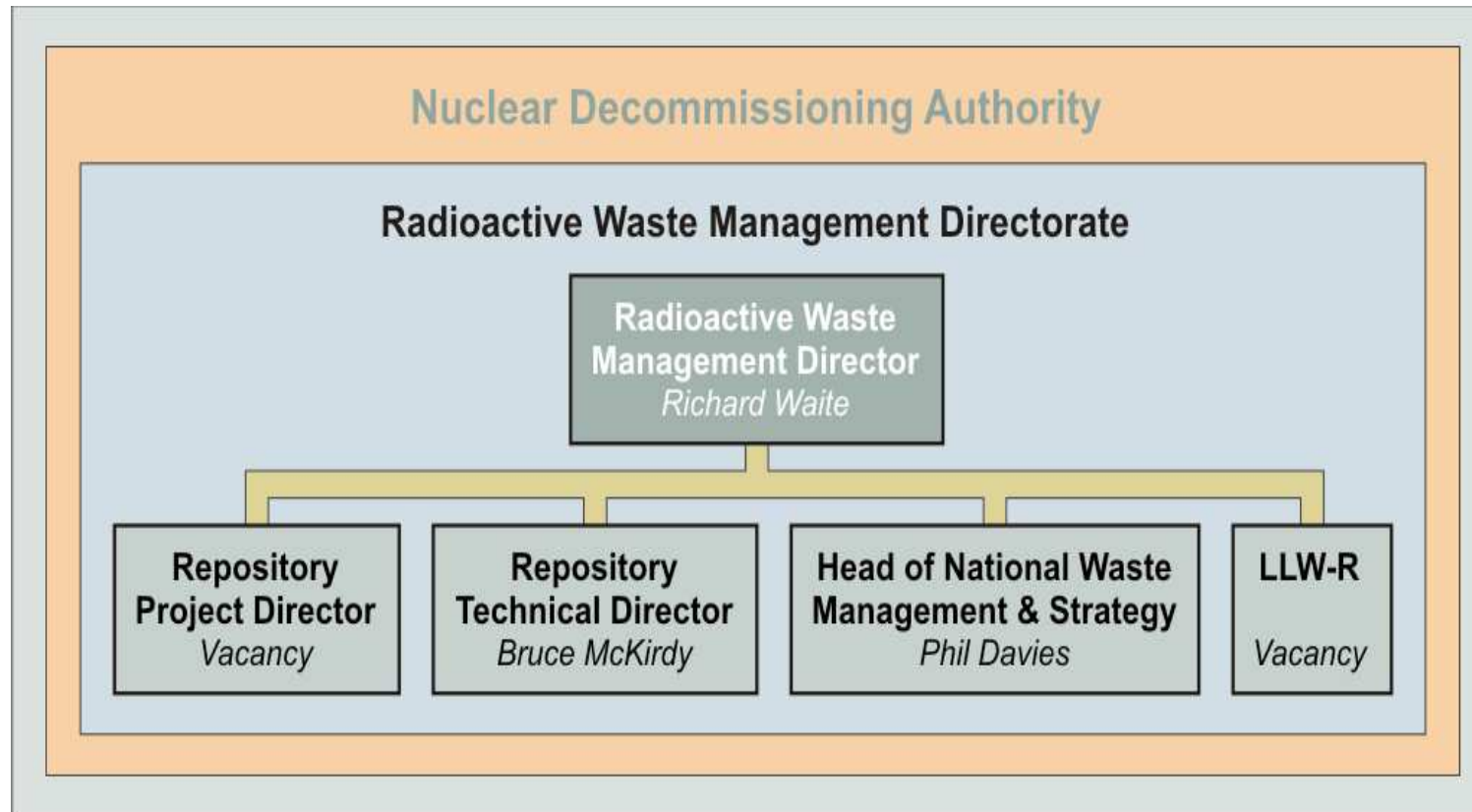


The NDA's mission

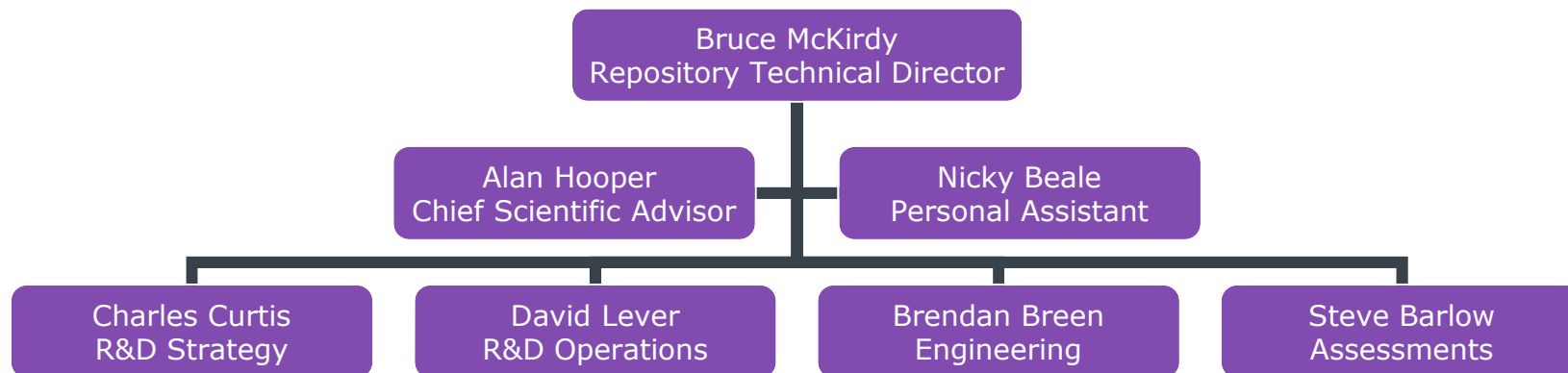
To deliver safe, sustainable and publicly acceptable solutions to the challenge of nuclear clean-up and waste management. This means:

- **Never compromising on safety or security**
- **Taking full account of our social and environmental responsibilities**
- **Always seeking value for money for the tax payer**
- **Actively engaging with stakeholders**

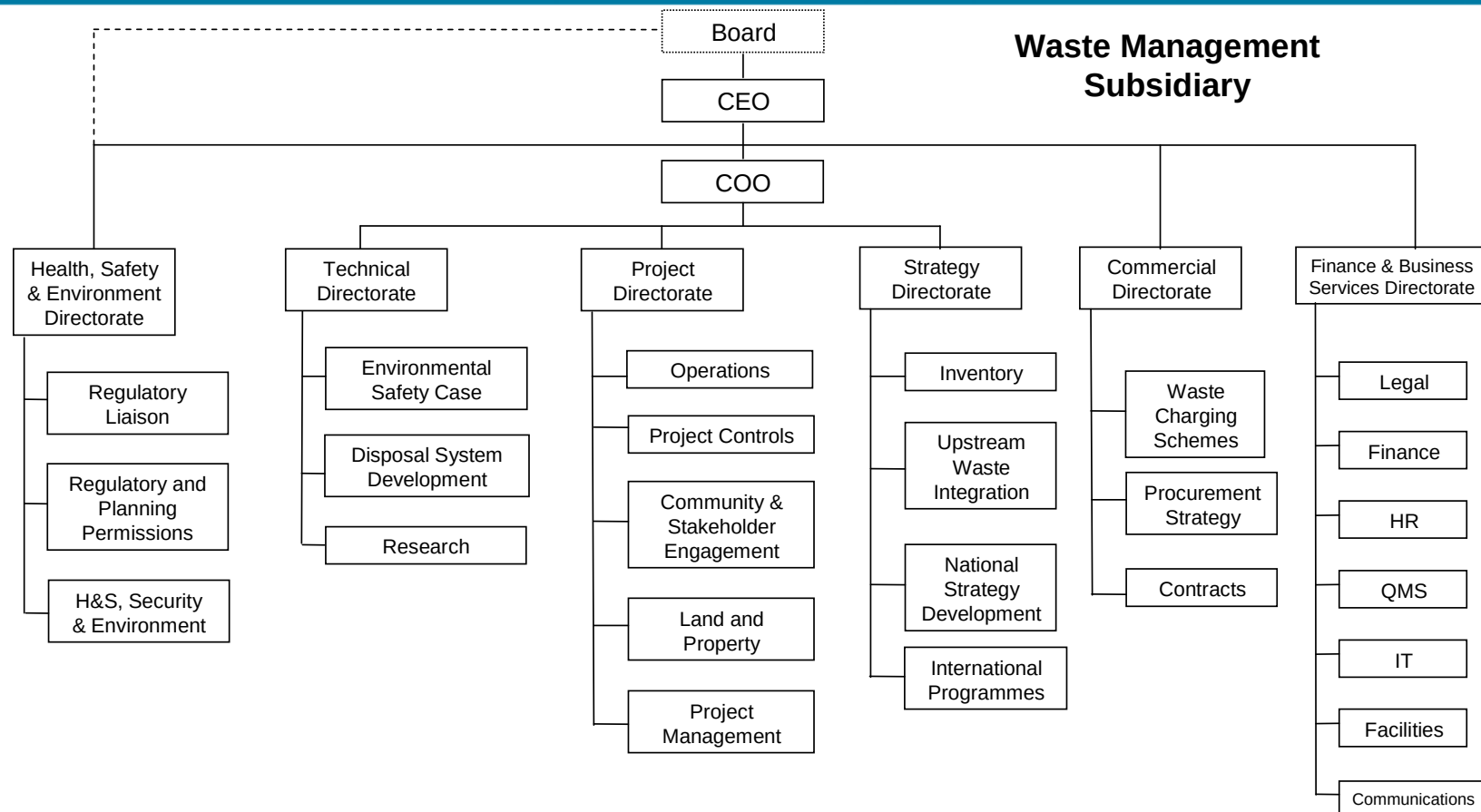
Radioactive Waste Management Directorate



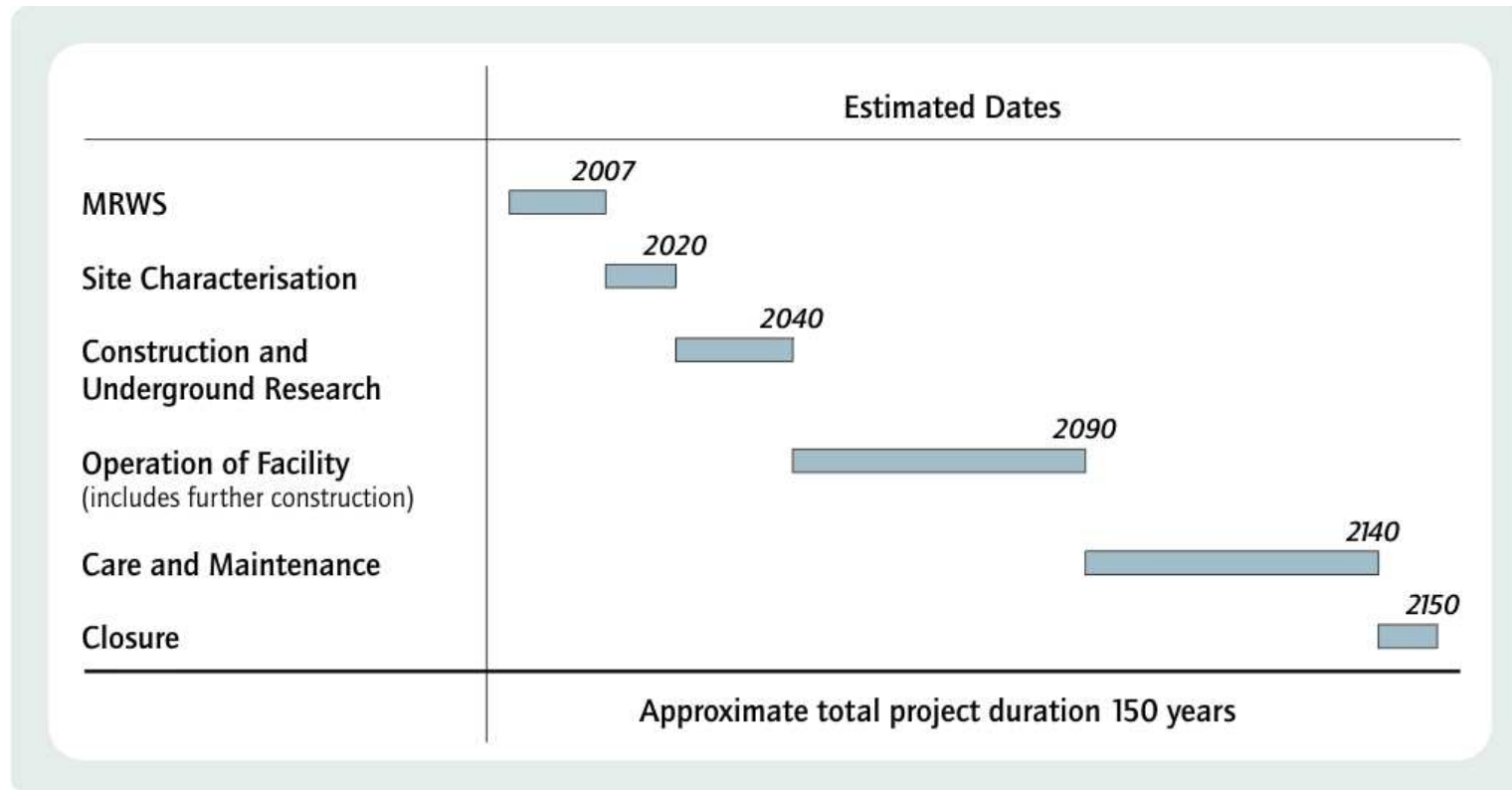
RWMD: Repository Technical Division



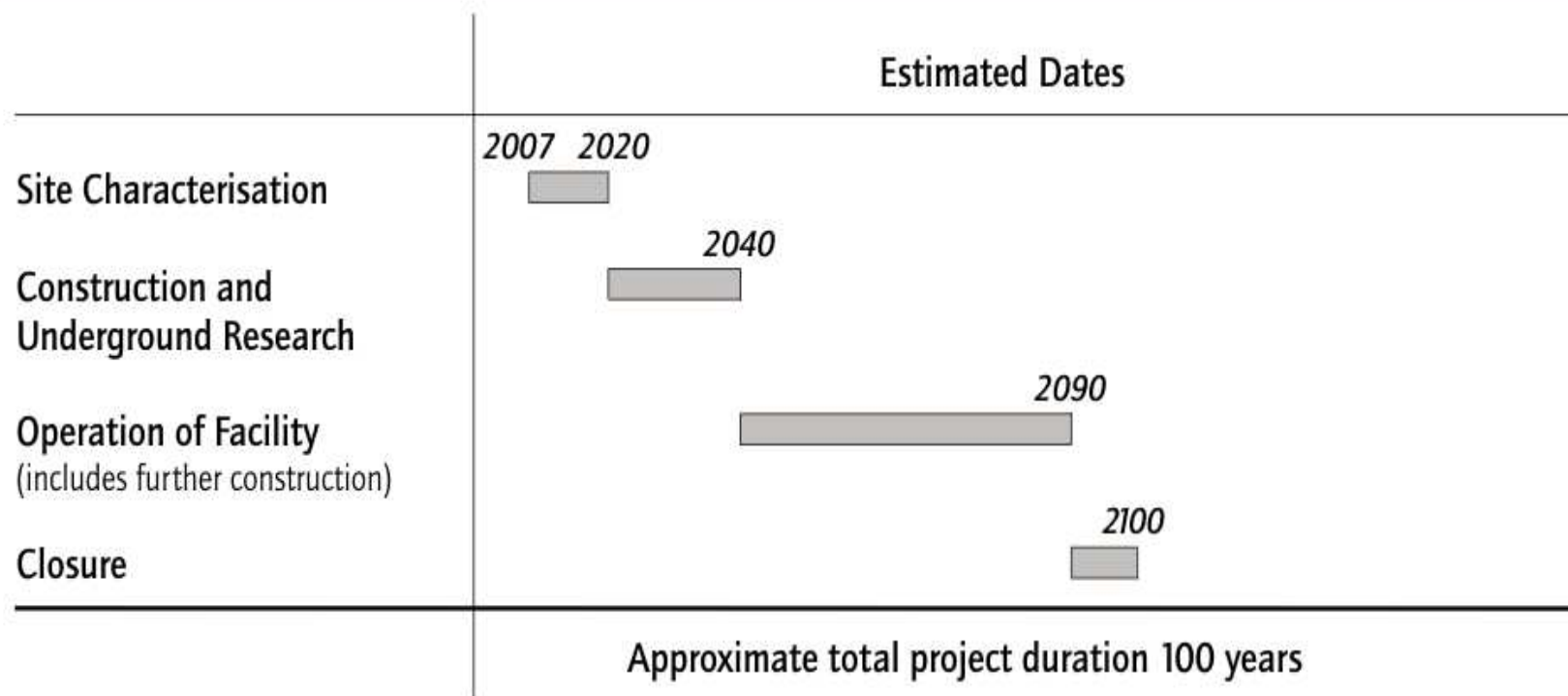
Possible Future Waste Management Subsidiary



ILW/LLW Repository Programme



HLW/ Spent Fuel Programme



Summary

- **UK Government accepted Geological Disposal**
- **Government Consultation on Site Selection and Delivery Programme**
- **Regulatory and Scientific support in place**
- **NDA has clear remit to implement geological repository**
- **Nirex integrated into NDA**

Audiences for the DSSC

- **Regulators**
 - **Environment Agency and Scottish Environmental Protection Agency**
 - **Nuclear Installations Inspectorate (NII)**
 - **Department for Transport (DfT)**
 - **Office for Civil Nuclear Security (OCNS)**
- **Scientific Community**
 - **Academic Community**
 - **Learned societies**
- **Policy makers**
 - **UK Government officials**
- **Public**
 - **Local authorities, e.g. Nuclear Legacy Advisory Forum (NuLeAF)**
 - **Potential host communities**
 - **Individuals interested in UK Government consultation programme**

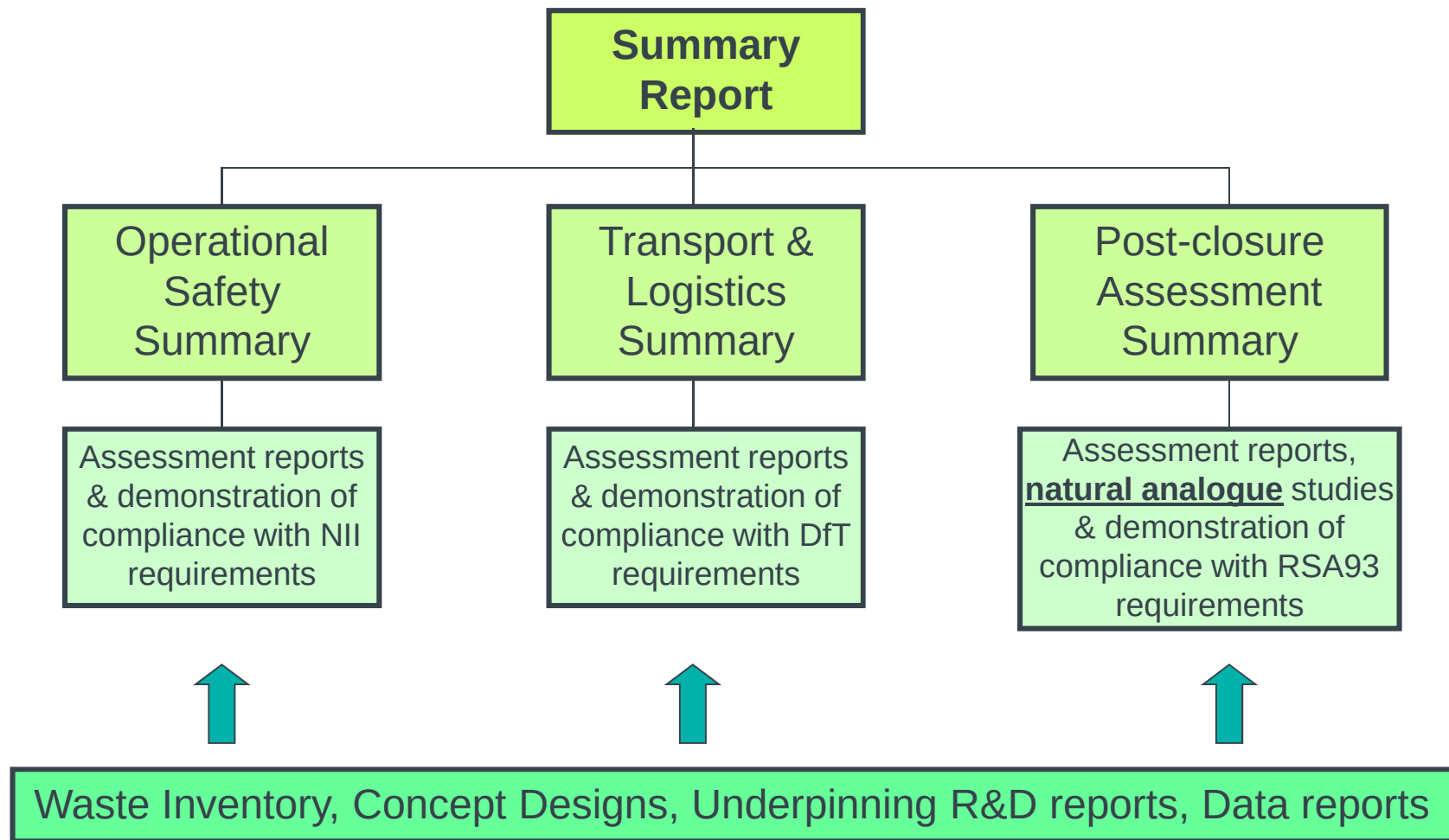
Natural Analogues in UK Programme

- **Keen interest in natural analogues since the 1980s**
 - **Loch Lomond**
 - **Poços de Caldas**
 - **Maqarin (Phases 1-IV)**
- **Historically used to support parameter selection for PCPA**
- **See increasing role for natural analogues as part of DSSC**
- **Define ‘natural analogues’ in broad sense, covering all evidence from environment around us**

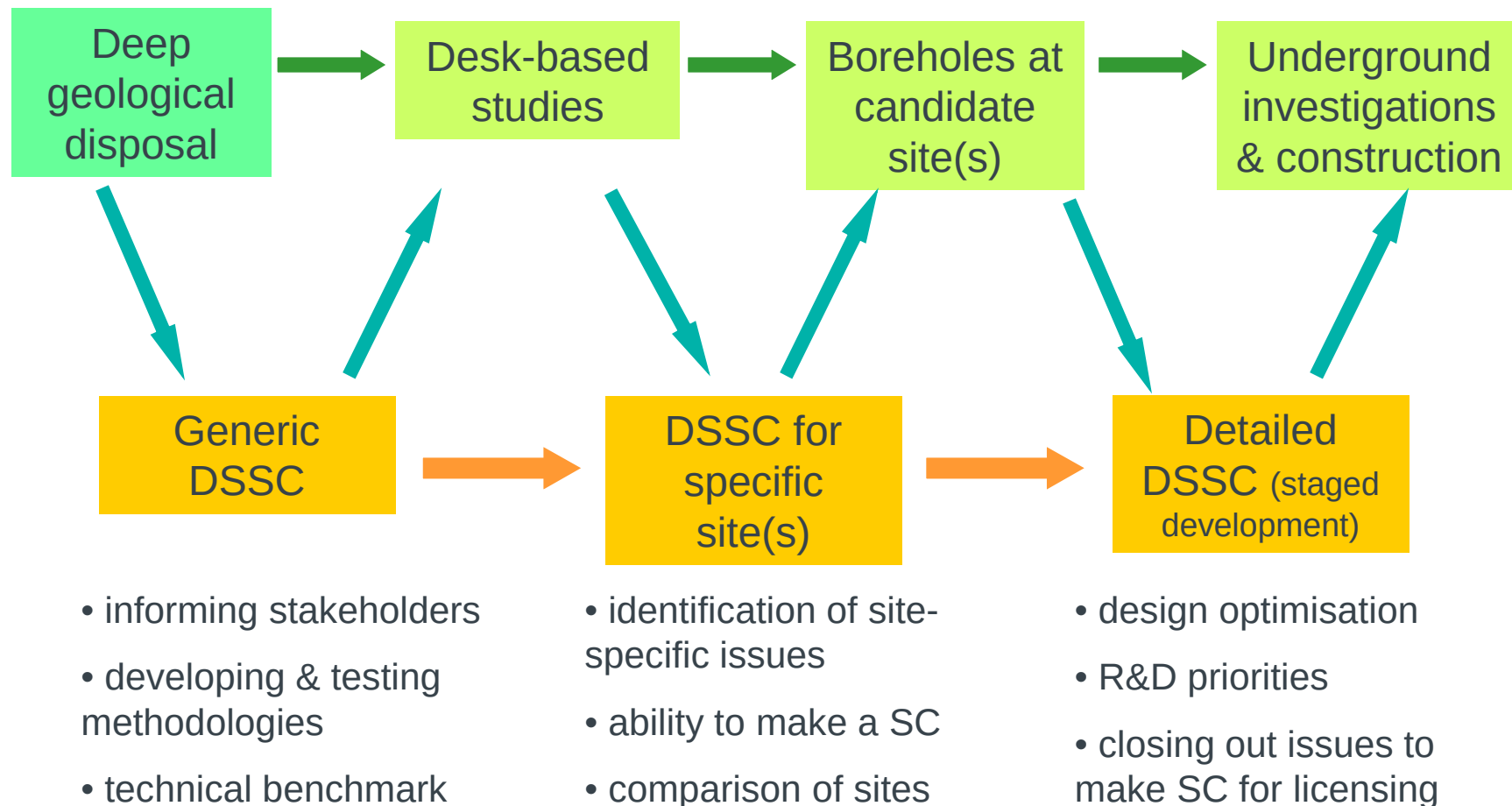
What is the DSSC?

- **single safety case addressing transport, operations and post-closure**
- **hierarchical safety case that communicates to different audiences, including regulators and the public**
- **multi-factor safety case drawing on wide range of safety arguments and analyses**
- **builds an appreciation of repository design and safety functions and their evolution over different timeframes**
- **flexibility to develop to address different stages of repository development programme**

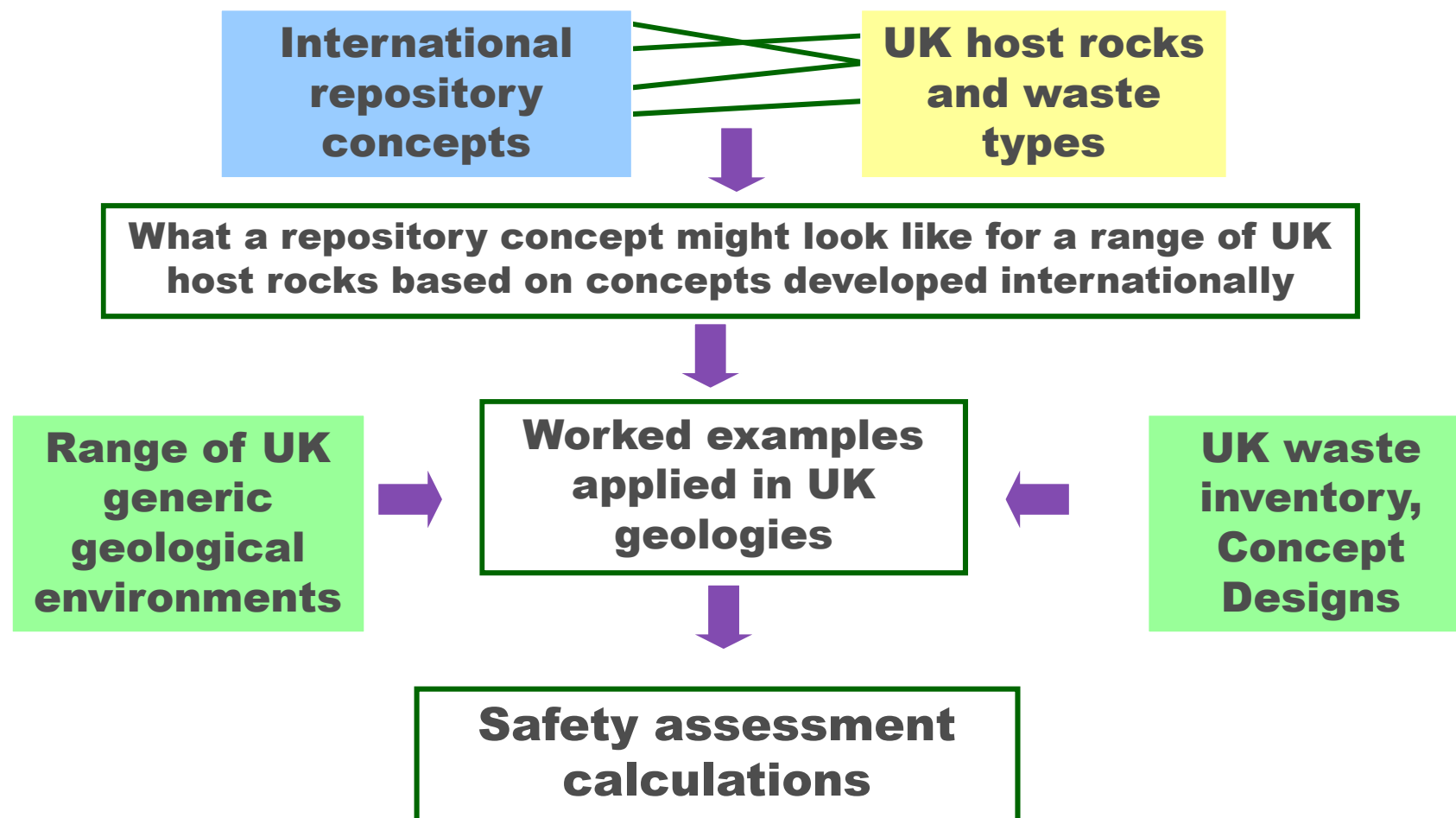
DSSC Structure



Proposed Development of the DSSC



Proposed Methodology for a Generic DSSC



Where next?

- **Developing high-level documentation for DSSC**
- **Testing communication using natural analogues within this**
- **Taking active role in PAMINA**
- **Considering possible new well-targeted analogue studies where relevant to UK disposal concept**
 - **high pH studies**
 - **other studies relevant to HLW**