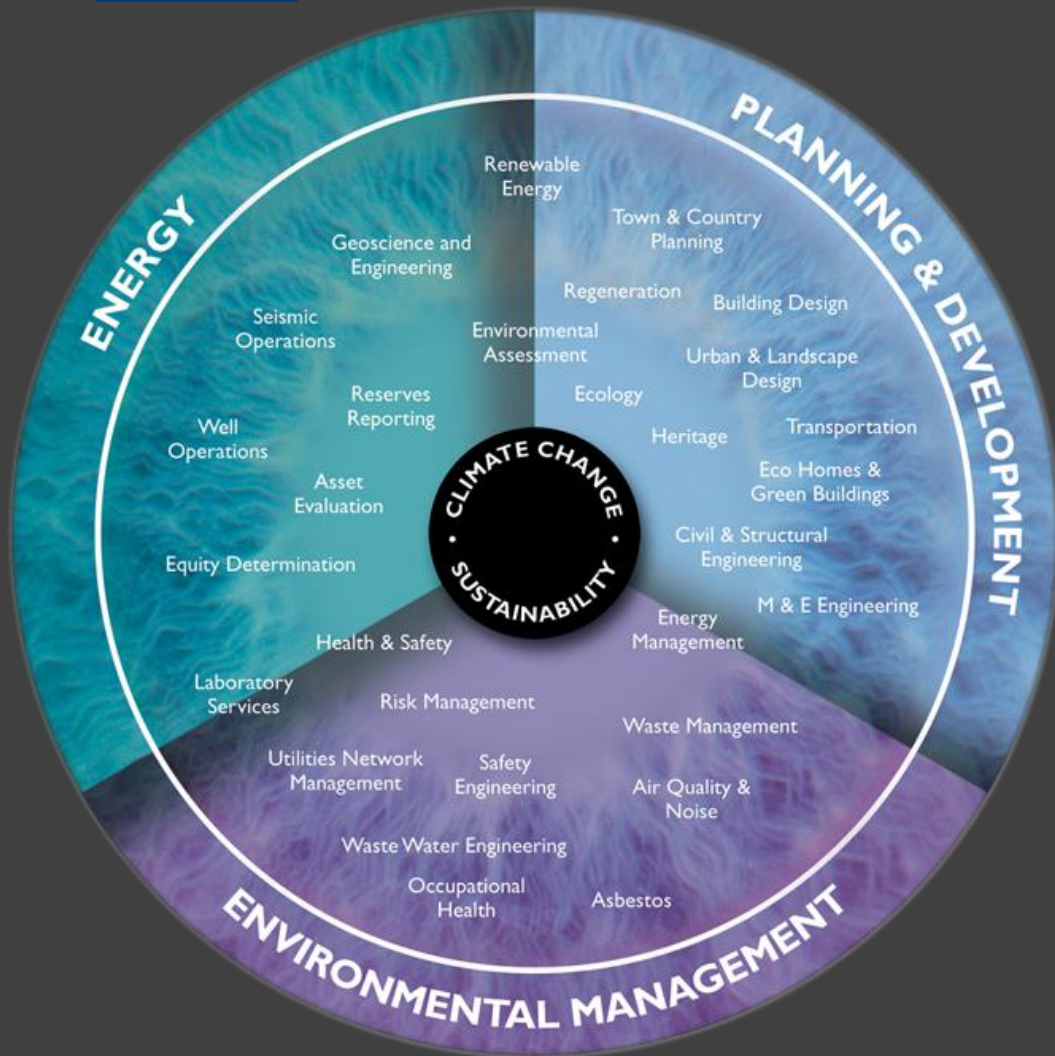




Radiological Characterisation and Decommissioning in the UK Non-nuclear Industry

**Project Experience, Challenges and
Solutions**

Dave Cannon – Principal Consultant



RPS is an international consultancy providing independent advice upon the development of natural resources, land and property, the management of the environment and the health and safety of people



RPS

Site: *National Physical Laboratory*
Client: *BAM Nuttall Ltd*
Project: *Site characterisation and remediation to support re-development*

Site: *Boldrewood Campus*
Client: *The University of Southampton*
Project: *Characterisation of Biosciences building to support demolition*

Projects

RPS

**National
Physical
Laboratory**



- Provides national standards in measurement and traceability
- Operated for over 100 years (Marie Curie)
- Multitude of different radionuclides used
- Extensive use of radium-226 associated with WWII
- Required building and land to be characterised to support site re-development

RPS

Contamination found:

- under building floor screeds and ground slabs
- small outbuildings e.g. pump house
- base of redundant source wells
- old brick bunds set in ground
- in buildings with no 'historical' use of radioactive materials

Environmental Permit gained

Decommissioning work
tendered

Exempt, VLLW and LLW
disposed of from site

Environmental Permit
Surrendered



National
Physical
Laboratory



RPS

**Biosciences
Building**

- University building from circa 1970
- Mostly beta (H-3, C-14, P-32) with some gamma (and alpha) in Radiation Suite
- Building required characterisation prior to demolition and site re-development



RPS

Designed building survey using Data Quality Objectives (DQO), risk based

Modified approach to meet client programme requirements

Characterised glass effluent discharge system, associated tanks and surrounding soils

Varied Environmental Permit to support anticipated waste disposal

Disposed of exempt, VLLW and LLW from site

Biosciences Building



Summary and Key Learning

- Expect the un-expected
- Understand client programme
- Have a well planned but flexible approach