

## Capability for Nuclear Waste Facilities

TerraConsult provides a range of services to the nuclear industry including:

- Landfill engineering for Low Level Radioactive Waste (LLW);
- Environmental Safety Case and EPR Permit Applications;
- Article 37 submissions to EU on potential transboundary impacts;
- Decommissioning/contaminated land assessments;
- Geotechnical and civil engineering.

### Clifton Marsh Landfill, Lancashire:

#### Installing 1.2km long bentonite cement cut-off wall at Clifton Marsh Landfill



This site is operated by SITA and takes low level radioactive waste (LLW) for disposal. TerraConsult provides project management, engineering design and Construction Quality Assurance (CQA) for the landfill cells and regulatory compliance support for the whole landfill. In 2009 TerraConsult completed the design and CQA of a 1.2 km long bentonite cement cut-off wall for a new cell which was up to 17 m deep. We are currently supervising capping of a completed cell and designing a dewatering scheme for a 10 Ha area of the site.



**Keekle Head Waste Management Centre, Cumbria:**

TerraConsult is the project manager for the design of this proposed new 1 million m<sup>3</sup> facility, which will accept low activity LLW. TerraConsult have contributed to the planning application and completed detailed ground and groundwater investigations, a hydrogeological risk assessment, environmental monitoring, site preparatory earthworks design and the landfill engineering design.

**PROPOSED LLW FACILITY in Cumbria for SITA UK**

Keekle Waste Management Facility – Artists Impression (above).

For further information see:

<http://www.sita.co.uk/your-environment/our-plans/keekle-head/?searchterm=keekle>

**Landfill, Greater Manchester:**

TerraConsult provides advice to a specialist alloy manufacturer who operate their own landfill site, which takes a range of industrial wastes including LLW. This includes providing regulatory compliance support, landfill engineering design, contract management, on site supervision of contractors and environmental monitoring.

**LLWR Near Drigg, Cumbria:** The LLWR is the UK's largest radioactive waste disposal facility.



TerraConsult was employed by Birse, the Principal Contractor for the construction of Vault 9, to provide advice on the construction of the engineered containment lining systems and drainage. TerraConsult are one of the UK's leading experts in the use and practical application of Bentonite Enhanced Soil Lining materials and geomembranes for containment engineering.



## Construction of Containment Systems and Drainage

**Article 37 Transboundary Impact Studies (Euratom Treaty):** TerraConsult have been a key contributor to the Article 37 submissions to the EU for two radioactive waste facilities. One for a landfill in England and the other for a NORM treatment plant

A number of our staff are members of the Safegrounds Learning Network and TerraConsult is a member of Safespur. These forums are run by CIRIA to disseminate good practice to contractors and consultants working on the decommissioning of nuclear and defence sites. We have experience in providing the relevant Health and Safety documentation and method statements for working in nuclear and defence sites.

Our staff have also worked on the investigations for the deep radioactive waste disposal facilities both at Sellafield and Dounreay during the 1990's, and are familiar with the radiological protocols at other nuclear and defence facilities.

