



FCG was retained to identify the scale and approximate cost of contaminated land liabilities at the site of an active nuclear fuel production facility this was underpinned by a detailed CSM.

**Client:** Confidential Client

**Services Provided:**

- ✓ Peer review
- ✓ Project management
- ✓ Groundwater investigation
- ✓ Groundwater modeling & Risk assessment
- ✓ GIS maintenance and support
- ✓ Regulatory Monitoring

## Project Objective

Geosyntec Consultants (Geosyntec) U.K. office (formerly Ford Consulting Group) was retained to provide peer review and direction of a retained consultant's work in relation to an assessment of contaminated land liabilities at an 88Ha facility. The subject site has a 60-year history of industrial use. It was initially developed to produce chemical munitions during WWII. It has subsequently been used to develop and manufacture fuel rods for the nuclear power generation industry. The overall aim of the project was to identify the scale and approximate cost of contaminated land liabilities at the site in line with the requirements of the UK Nuclear Decommissioning Agency.

## Geosyntec's Scope of Services

Geosyntec has undertaken a large programme of investigation and assessment works including targeted investigation of shallow and deep groundwater quality, investigation in radiologically controlled environments, groundwater modelling and risk assessment. Subsequent studies have included delineation investigations of specific source areas and Monitored Natural Attenuation (MNA) assessments for chlorinated solvent groundwater and uranium plumes. A parallel study included the redesign and implementation of the sites Site Protection and Monitoring Programme (SPMP) required as part of their Environmental Permit. Geosyntec were also retained to project manage a study to design and license a VLLW repository at the site. These work streams are all underpinned by a Geographical Information System (GIS) which is managed and updated by Geosyntec.

## Notable Accomplishments

The outcome of these studies has been a more focused and better defined remedial action plan for the site that has been incorporated into the site decommissioning strategy. The sites contaminated land strategy is treated as a live document with annual updates produced that reflect the findings of recent investigations and monitoring data coupled with ground characterisation works associated with the decommissioning of production buildings and plant.

The MNA assessment of groundwater impacts by chlorinated solvent sources has recently been completed. This has demonstrated the efficacy of MNA for each groundwater plume through the lines of evidence approach stipulated by UK guidance.

Geosyntec has also undertaken a redesign of the sites SPMP and has been retained to undertake the associated sampling and data assessment over a four-year period. The GIS database managed by Geosyntec has allowed clear differentiation between the effects of historical and recent contamination release events assisting the site in understanding their SPMP monitoring results in a meaningful way and focusing any corrective action requirements as they arise. The GIS is also used as a reference for ground contamination issues by the site Project Team involved in new developments at the site.