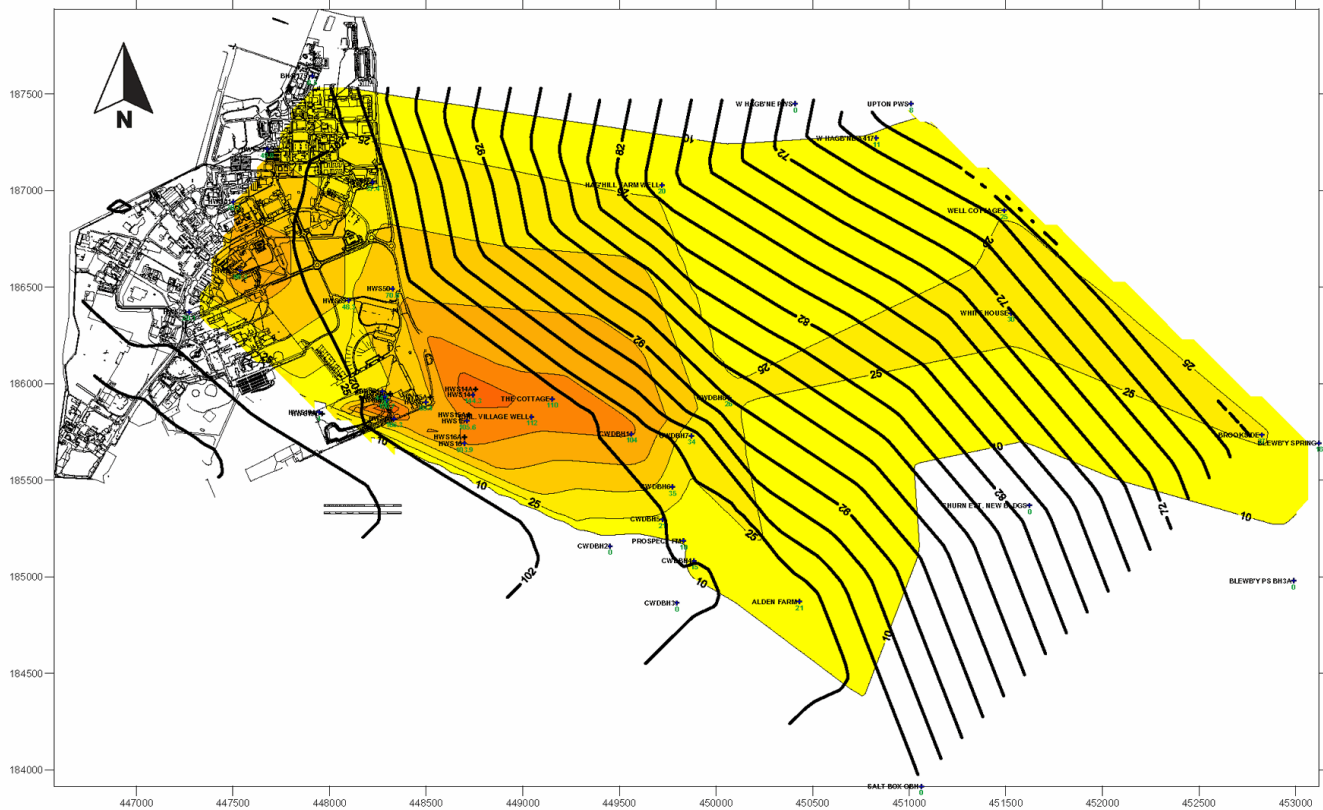


## Harwell Hydrogeological Support UKAEA



As a result of past disposal practices, groundwater in the chalk aquifer beneath UKAEA's Harwell site and beyond is contaminated with chlorinated hydrocarbons. UKAEA has undertaken work to remove the original sources of contamination, and ongoing groundwater remediation prevents the movement of the more contaminated groundwater away from the principal source. However, as a result of the historic release of chlorinated hydrocarbons, a plume of contaminated groundwater extends 6 km from the site boundary. UKAEA manages groundwater contamination through on-site source control and off-site receptor management. Source control consists of groundwater

abstraction, treatment to remove chlorinated solvents and re-injection as well as an ongoing programme of unsaturated zone remediation.

A programme of regular groundwater monitoring is undertaken at the site and across the wider area to aid the management of contamination. Entec reviews and regularly reports on the data collected from this programme to identify any trends in the data or gaps in the network. Entec also manage a large database containing monitoring information dating back to the early 1990s. These regular reviews ensure that UKAEA is confident that their understanding of groundwater contamination is robust.

Entec also undertakes liaison with environmental regulators at regular review meetings and has undertaken work to address particular regulator concerns related to the site conceptual model, cost benefit analysis for plume management options and gaps in the monitoring network.

As a result of this work, both UKAEA's and the regulator's confidence in their understanding of current and future groundwater contamination at the site and wider area is high. Discussions on future management are undertaken in an informed and forward-looking environment.

