

HUMAN HEALTH RISK ASSESSMENT

Following the completion of the ground investigation and subsequent chemical analysis of samples, an assessment needs to be made of the results obtained and the potential risks posed by the site to the previously identified receptors.

Determination of the risk to human health is undertaken using a two-tiered assessment, following the UK Contaminated Land Exposure Assessment (CLEA) framework.

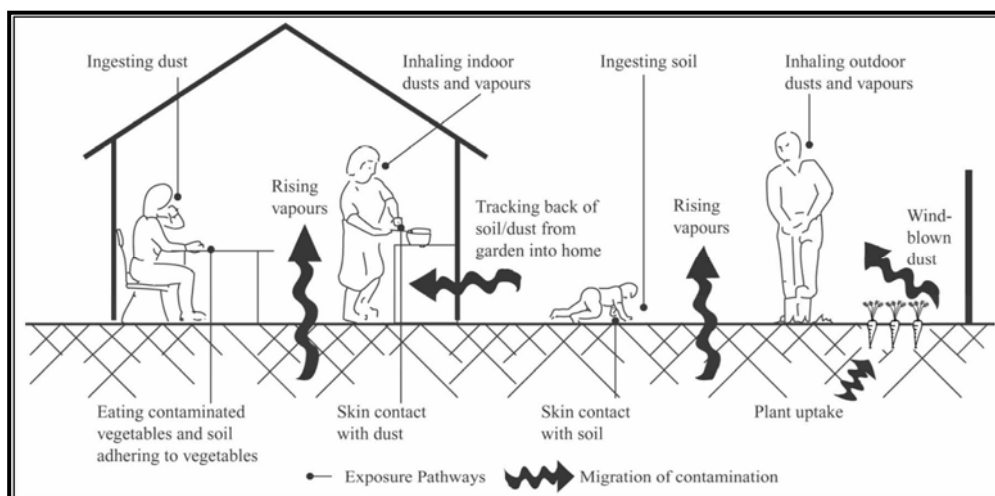
A Tier 1 assessment comprises the comparison of contaminant levels with published:

- Generic Assessment Criteria (GACs). Calculated using the CLEA framework;
- Soil Screening Values (SSVs), developed using ATRISKSOIL; or
- Soil Guideline Values (SGVs) to be published by the Environment Agency and DEFRA.

The generic guidelines have been created for three end-uses: residential (with and without plant uptake), allotments and commercial/ industrial settings, with the ATRISKSOIL SSVs also covering parks, playing fields and open spaces. The CLEA software can also be adapted for non standard land-uses.

Should exceedances of the Tier 1 criteria be identified at the site, a Tier 2 assessment is undertaken. Such an assessment involves the generation of Site-Specific Assessment Criteria (SSAC) utilising data collected from the site. Collected data is entered into the CLEA software to generate SSACs.

Data from bioaccessibility testing (PBET) can also sometimes be used with the SNIFFER model for naturally occurring concentrations of several contaminants including arsenic, lead and nickel.



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