

### OVERVIEW:

**Soil washing can be used to treat excavated soils with a water based process. It can remove contamination by either introducing chemicals to the wash water (e.g. adjusting pH, surfactants) to dissolve/separate the contaminants; or by concentrating contaminants into a smaller volume of soil through size separation.**

**It's been used successfully to treat heavy metals (e.g. chromium), organic compounds, semi-volatile and volatile organic compounds (SVOCs and VOCs) and pesticides.**

**The percentage of fines (particles with a diameter less than 0.063mm) in the soil has the single biggest impact on the potential success of soil washing. If the soil contains a high percentage of fines then volume reduction of contaminated material will be small and the soil washing process will be relatively inefficient. As a general guide, if the fine content of the soil is above 25% then soil washing will not be considered to be an effective technique to use.**

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### OUR ADVANTAGES:

- Tried and tested technique in the treatment of sand/gravel soils
- Wide application across a range of contaminants
- Cost savings from reducing off-site disposal requirements

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### TECHNIQUES:

Excavated contaminated material is firstly processed to remove oversized objects. Contaminated material then passes to the soil scrubbing unit. Wash water and soil are vigorously mixed, pH buffering and dosing with surfactants can be included to improve soil washing.

Free phase contaminants removed from the soil by the mixings and the 'dirty' water are separated from the soil and treated, allowing the water to be recycled. The coarser "clean" fraction gravels are separated at this stage and are often suitable for reuse on site.

The remaining mixture of water, fines (sludge) can be further sieved to remove heavy metal containing compounds, the sludge then under goes dewatering in preparation for further remedial treatment or disposal.