

# Remediation

Pump & Treat – Castenaso, Italy

Ecologia applies the same level of engineering and design to its pump and treat systems that it does to other more complicated techniques such as In- Situ Radio Frequency Heating (ISRFH) of soils. The result is effective, robust equipment that requires little maintenance and is able to operate over the long periods of time often required by pump and treat systems.



The contract was for a small scale pump and treat system to recover free phase oils and contaminated groundwater from a residential area in the town of Castenaso, Italy.

Ecologia won the design and build contract following competitive tender and were able to design, build, install, commission and operate the system within the agreed budget. The system is a compressed air driven pumping system with down well top loading total fluids pumps. The recovered liquids are passed through an Ecologia designed constricted space oil / water separator to achieve laminar flow within tight spaces and ensuring good separation of oil droplets from an aqueous water stream. The aqueous flow is then pumped through twin activated carbon filters arranged in series so that protection to the discharge point is ensured by sampling after the initial filter.

One very important factor that this project demanded was to minimise the level of noise generated by the remediation system. The equipment was required to be adjacent to an apartment block on a quiet residential street for a timeframe of over one year. Ecologia were able to achieve a noise level of only several dba above background while the compressor was operating by using careful noise attenuation design and sourcing of specialist quiet components.