

Project Profile:

Assessment of Potential Environmental Liabilities & Remediation Costs with Ground Investigation & Groundwater Risk Assessment

Remada

Former Site Use: Manufacturing Site Landfill

Value: £21,000

Client: Confidential

Location: Kent

Due Diligence

Desk Study

Intrusive Ground Investigation

Human Health Risk Assessment

Water Resource Risk Assessment

Mining Risk Assessment

Preliminary Foundation Design Recommendations

Remediation Strategies & Method Statements

Pre-acquisition Advice

Abnormal Cost Assessment

Materials Management Plans & Declarations

UST Decommissioning

Soil Bio-remediation

Soil Stabilisation

In-situ Groundwater Remediation

EA Remediation Permit

Verification & Completion Reports

Soil Treatment Facility

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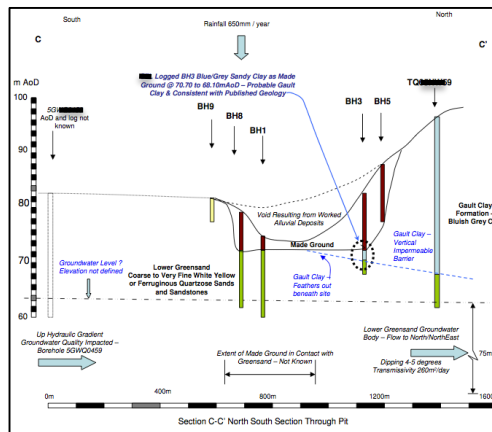
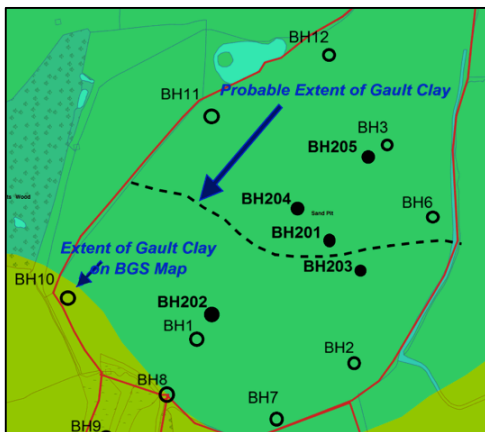
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The owner of a manufacturing site was in receipt of a site investigation report that identified significant pollutant linkages between factory waste deposited in an on-site landfill and the underlying principal aquifer and groundwater protection zone. The landowner was also in receipt of a proposal for large-scale and expensive soil and groundwater remediation as result of the recommendations of the site investigation report.

Our initial review of the site investigation report revealed inconsistencies between the description of waste soils and the underlying natural clay that could provide a barrier between the waste and groundwater protection zone. We reviewed published data for underlying geology in order to compare the site investigation descriptions of waste soils with intact natural geology that would form a base to landfill. Published hydrogeological reports also indicated that the depth and direction of groundwater flow may be different to that previously reported. A detailed review of the historical sand pit excavation and waste records also indicated that protective basal clay had not been worked, and that the deposited wastes were largely inert soils.

We implemented further ground investigation to disprove the earlier soil descriptions, obtain undisturbed samples of basal clay for permeability testing and install groundwater sampling wells with separate and discrete response zones in the both waste and underlying aquifer. We conducted rising head permeability testing; and carried out a reduced level survey to determine gradient.



The data, combined with published records enabled the conceptual site model to be updated and to disprove a pollutant linkage where impermeable basal clay was present. In one zone where clay was not present, the data provided input parameters for a groundwater detailed quantitative risk assessment (DQRA), which demonstrated that the concentrations of contaminants of concern did not pose a risk to the groundwater inner source protection zone.

Our client was able to negate the liability and cost of remediation at the site.