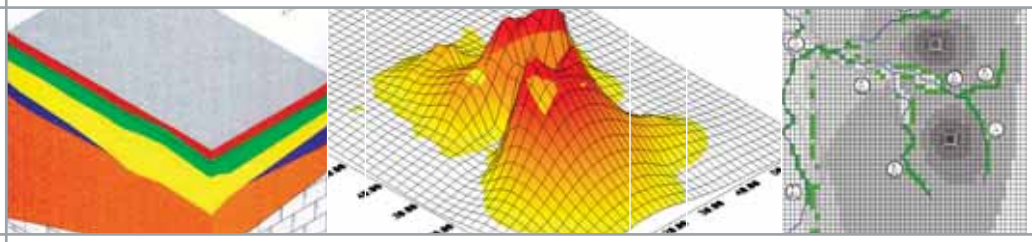
groundwater flow and contaminant transport modelling

Capita Symonds specialises in solving soil and groundwater problems.



Capita Symonds specialises in the application of groundwater flow and contaminant transport modelling, quantitative risk assessment and hydrogeological techniques to solve soil and groundwater problems for clients.

Our environmental modelling group has applied groundwater and risk assessment models in water resource evaluation, mineral extraction, and site investigations and remediation for numerous industrial sites contaminated by chlorinated organic solvents, petroleum hydrocarbons, metals and radionuclides.

Our groundwater modelling service can provide solutions for:

contaminated land risk assessment
groundwater protection and management
minewater pollution
remedial alternatives and design
river-aquifer interactions

CAPITA SYMONDS

successful people, projects and performance

Groundwater protection and management

- conducting groundwater vulnerability studies
- defining the time-related groundwater protection zone (GPZ)
- evaluating conjunctive use of groundwater and surface water resources

River-aquifer interactions

- quantifying river-aquifer interaction
- assessing hydrological and ecological effects of groundwater abstraction on stream flows

Minewater pollution

- predicting the timing and rate of minewater rebound after the closure
- assessing environmental impact of minewater outbreak on surface water quality
- developing mitigation/remediation strategies

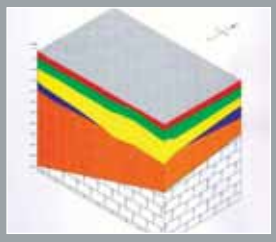
Contaminated land risk assessment

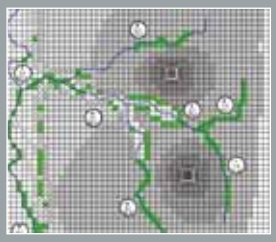
- baseline risk calculations to human health for landfill and petroleum release sites, and from air emissions
- developing generic screening and site-specific assessment criteria or clean-up levels to satisfy regulatory requirements

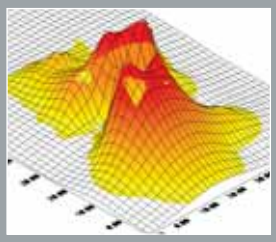
Remedial alternatives and design

Evaluation, remedial design and cost-benefit analysis for a wide range of remedial options including:

- monitored natural attenuation (MNA)
- air sparging
- soil vapour extraction
- pump and treat
- reactive barrier wall (funnel and gate)
- hydraulic containment







We routinely utilise industrial standard numerical and interface models such as :

GWVistas
GMS
MODFLOW
MT3DMS
PHT3D
RT3D
UTCHEM
BIOREDOX
MINTEQ
PHREEQC

Please contact:

Dr. Mengfang Chen, Technical Director Tel: 01342 333359 mengfang.chen@capita.co.uk
Liz Waterfall, Senior Hydrogeologist Tel: 01342 327161 liz.waterfall@capita.co.uk

www.capitasymonds.co.uk