

groundwater services



CAPITA SYMONDS

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providing a full range of groundwater services to environment and engineering projects

Capita Symonds offers a wide range of groundwater services in support of environmental engineering projects for both public and private sector clients - in particular the minerals, waste management, brownfield re-development, and civil engineering industries.

With the ongoing implementation of the Water Framework Directive (and its 'daughter' Groundwater Directive), groundwater - and its role in the support of water-dependent ecosystems - has become a high priority which needs to be addressed by developers. Capita Symonds' hydrogeologists are highly experienced in this field and have a reputation for offering 'fit-for-purpose', practical advice to clients in helping them to comply with changing regulatory requirements and to achieve environmental improvements as an integral part of their business.

Capita Symonds groundwater specialists offer a full complement of hydrogeological skills and services from 'back to basics' hydrogeological desk studies and conceptualisation, through to analytical risk assessment or numerical modelling where appropriate.

abstraction licence applications

controlled waters risk assessment (EA remedial targets methodology, ConSim)

discharge consent applications

environmental impact assessment

expert witness services

groundwater engineering

habitat creation and restoration

human health risk assessment (CLEA, RBCA)

hydrogeological & hydrological field test design, supervision and interpretation

landfill risk assessment (LandSim)

mitigation measure design, operation and implementation

monitoring scheme design, operation and implementation

numerical modelling (MODFLOW, MT3D)

quarry and mine water management scheme design

regulator negotiation

remediation strategy design and implementation

water feature and quality surveys

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Wetland Impact Assessment

Groundwater and surface water interaction is integral to wetland maintenance and restoration. Our Hydrological Protection Zone methodology has been applied to several wetland projects, including the preparation of Danes Moss SSSI restoration strategy.



Abstraction Licensing and Water Resources

In many areas groundwater resources are in high demand, and licensing for abstractions can be a sensitive issue requiring regulator negotiation. We are experienced in undertaking water features surveys; pump tests; and hydrogeological impact assessments for abstraction licenses.

Minerals Hydrogeological Assessment

Capita Symonds is at the forefront of practical field based research on the impacts and mitigation of quarrying on the water environment. Our knowledge of recharge trenches, wells and low permeability barriers as mitigation measures, has been used to support various mineral planning applications.



Landfill Risk Assessment

A risk assessment for groundwater and surface water is a necessity for landfills under the Environmental Permitting Regime. Capita Symonds undertakes risk assessments for new sites and extensions to existing facilities, from initial desk study through to site investigation, monitoring and regulator liaison.

Brownfield Risk Assessment and Remediation

We are an industry leader in human health/controlled waters risk assessment and remediation. Projects include site-specific remedial strategies for parts of the London 2012 Olympic Park; and risk assessment / design of a permeable reactive barrier system at a former pesticide plant in Kent.



Groundwater Modelling

A numerical groundwater model may be required to understand and predict the effects that engineering activities have on the groundwater/surface water environment in multiple dimensions. We produced a regional groundwater model for the drift aquifer underlying the London 2012 Olympics Park.

Groundwater Control, Drainage and Land Stability

Groundwater is often an important factor when considering the design and engineering of schemes. Groundwater specialists in Capita Symonds regularly advise on hydrogeological issues regarding developments including inflow rates to excavations, soakaway design (shallow and deep), dewatering design and land stability.



Groundwater Flood Risk Assessment

Flooding not only occurs due to surface water overspill but also as a result of groundwater levels rising above ground. Working closely with Capita Symonds hydrologists and hydraulic modellers, our groundwater specialists assess the likelihood, timing and magnitude of potential groundwater flooding.

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www.capitasymonds.co.uk/earthscience

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