Providing leading-edge integrated urban drainage for 25 years

www.raaltd.co.uk
Company History

RAA was established in 1996 to deliver innovative solutions for the complex needs of customers in the urban drainage industry. As consulting engineers, we maintain a traditional family-based approach to business, by putting client needs first and resolving flooding problems in the urban environment using the latest cutting-edge hydraulic modelling and analytical techniques.

Location and Coverage

As an SME we are highly responsive and cost-effective whilst at the same time offering a high quality specialised service. With offices in Sussex and Greater Manchester, we operate nationally with a strong team of hydraulic modellers, hydrologists and GIS technicians to resolve flooding issues across the UK and Ireland.

Client Base

At RAA we work with a wide range of clients. The depth of our expertise and the quality of our interpretive guidance sets us apart from our competitors and cultivates a strong client base spanning multiple sectors and industries.

Our Clients Include

Anglian Water • Scottish Water • Severn Trent Water • Southern Water • Welsh Water • Wessex Water • Yorkshire Water • Irish Water • Thames Water • United Utilities

Bournemouth Borough Council • Conwy County Borough Council • East Sussex County Council • Gloucester City Council • Gloucestershire County Council • Hampshire County Council • Havant Borough Council • Poole Borough Council

Defra • Environment Agency • SEPA • UKWIR • CIWEM • Pick Everard • Royal HaskoningDHV • Jacobs • Metis Consultants • Network Rail • BAM Nuttall • Mackley • PBH Rail • Water Management Alliance

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Services

1D Modelling
• Sewer modelling
• River modelling
• Drainage area plans
• Drainage pathway identification

2D Modelling
• Reservoir (dam break) inundation modelling
• Breach modelling
• Overtopping modelling
• Pluvial runoff modelling
• Tidal intrusion modelling
• Groundwater impact modelling

Integrated 1D-2D Modelling
• Surface water management plans
• Integrated urban drainage modelling
• Integrated catchment studies
• Flood forecasting

Hydrology
• Hydrological assessments
• Peer reviews
• Flood forecasting

Risk Assessments
• Strategic flood risk assessments
• Flood risk assessments
• Probability assessments

Feasibility Studies & Design
• Optioneering
• Hydraulic design
• Sewerage design
• SUDS design
• Flood defences design
• Toolkit measures design
• Cost estimates
• Cost-benefit analysis

Other Services
• Remote Aerial Surveys (see subsidiary www.remoteaerialsurveys.co.uk)
• Remote simulation service
• Survey management
• Expert witness
• Data analysis
• GPS & topographic surveys
• Research & development
• Technical audits
• Mapping

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Discipline Leads

Richard Allitt  BSc FICE CEng CEnv
Richard has more than 40 years' experience working with many UK water companies and local authorities. With a background in civil engineering and urban drainage, Richard has developed particular expertise in hydraulic modelling of sewerage systems and rivers and 1D-2D integrated catchment modelling. As co-author of the CIWEM UDG Code of Practice for the Hydraulic Modelling of Urban Drainage Systems (2017) and the CIWEM Integrated Urban Drainage Modelling Guide (2009), he is recognised as one of the leading thinkers in the urban drainage industry.

Martin Allitt  BEng (Hons) MCIWEM
Martin is a Director of RAA and principal engineer who pioneered the use of the latest advances in Unmanned Aerial Vehicles (UAVs) for the company. Originally devised as a method for inspecting difficult-to-reach river channels, he is responsible for the team which has developed this venture to provide a wide range of aerial surveys and mapping for the urban drainage and flood risk and water management industries.

John Hilson  BSc CEng MICE MCIWEM
John has over 35 years' experience in the water industry working for water companies and consultancies. John's principal area of technical expertise is wastewater networks and he has significant experience of all aspects of analysis, design and construction. John led the establishment of our Altrincham office and is responsible for Northern operations.

Expertise

• In 2017 Richard Allitt co-authored the new CIWEM Code of Practice for the Hydraulic Modelling of Urban Drainage Systems and is lead author of the 2021 revised Integrated Urban Drainage Modelling Guide.
• RAA have been partners of Susdrain since it began and are committed to developing awareness of the importance of sustainable drainage throughout the industry.
• RAA were on the CIRIA project steering group for 'Delivering Better Water Management through the Planning System' in 2019.
• RAS joined the CIRIA steering group for the development of guidance in the use of unmanned aerial vehicles in infrastructure asset management.
• RAS are one of only 4 companies on a framework with permissions to carry out remote aerial survey work for Network Rail.

Software

We use state of the art analytical techniques including the following:
• InfoWorks ICM
• InfoWorks CS
• InfoWorks RS
• InfoNet
• InfoWorks ICMLive
• FEH (WINFAP, ReFH2)
• PDM
• RedUp Perturbation tool
• ArcMap
• ArcGIS Pro
• MapInfo
• FME
• Global Mapper
• Pix4D
• Autocad

RAA has full ISOQAR certified Quality ISO 9001, Environmental ISO 14001 and Health and Safety ISO 45001 management systems in place. We are also working towards ISO 27001 Information Security management certification.

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