An insight into Water Infrastructure
RPS is the leading provider of professional and field-based support services to the water sector, helping deliver outcomes and customer satisfaction through an integrated “strategy to operations” delivery service.

5000 TALENTED PEOPLE
250 DIVERSE SERVICES
125 COUNTRIES
6 CONTINENTS
1 SECURE COMPANY
We employ over 5,000 staff in the UK, Ireland, the Netherlands, the United States, Canada, Australia and South East Asia and deliver services across a broad range of disciplines and sectors.

RPS is a FTSE 250 company quoted on the London Stock Exchange. It is a member of the FTSE4 Good index and a secure and stable business in uncertain times.

We are uniquely placed to provide a fully integrated service to our clients, whether this is developing strategy and policy, meeting regulatory and legislative requirements or managing risk.

Our UK water business employs around 1000 staff and has been providing services to the water industry since 1993.

We work for all the UK water and sewerage companies and most of the water-only companies. We also work for Environmental Regulators, Local Authorities, Government Organisations and private clients.

We have a reputation for meeting the challenges posed by large, complex projects and for conducting business in an open and responsible manner. Our strategy seeks to ensure continuous improvement in the range and quality of the services that we provide and the delivery of tangible results for our clients.

UK water companies are seeking to improve customer outcomes and protect the environment through reducing leakage, sewer flooding, pollution and providing a positive customer experience. They are looking to deliver this with a more balanced approach to operational and capital expenditure. RPS is ideally positioned to support them in achieving their objectives, through its integrated consultancy and field services offering.

Our services include:

**Water Technical Consultancy**
- Leakage Economics and Consultancy
- Water Networks Hydraulic Modeling
- Pressure Management
- Water Network Design
- Water Resources
- Water Efficiency
- New Connections
- Asset Management

**Water Operations**
- Leakage Detection
- Meter Verification
- Smart Meters
- Water Quality Surveys
- Underground Water Asset Mapping
- Pressure Management
- Mains Cleaning and Flushing

**Wastewater Technical Consultancy**
- Wastewater Hydraulic Modeling
- Drainage Area Planning
- Sewerage Management Planning
- Developer Impact Assessments
- Wastewater Network Design
- Flood Risk
- Sustainable Drainage Asset Management

**Wastewater Operations**
- Sewer Flow Monitoring
- Sewage Quality Monitoring
- Drainage Network Surveys
- CCTV Surveys
- Impermeable Area and Connectivity Surveys
- Underground Wastewater Asset Mapping
- Geodetic Surveys
- 3D Laser Scanning

Software Solutions – Water and Wastewater Network Management
Ecological and Environmental Consultancy

RPS is a leading multi-disciplinary consultancy with the expertise to support clients across a range of different sectors and services. We are acknowledged as experts in energy, transport, planning, water, wastewater, waste, design and environmental consultancy.
INTERRUPTIONS TO SUPPLY
RPS has industry leading experience in minimising disruption to customers. We work with our clients and their contractors to develop and implement best practice solutions to minimise interruptions. Our skills and experience include:
- Business Culture Change and Process Development
- Contingency Planning and Risk Mitigation
- Planned Maintenance
- Alternative Supply Techniques
- Under-Pressure Repair Techniques

REVENUE INCOME
RPS has an extensive field force that uses industry leading mobile technology to maximise revenue income. We have undertaken void property surveys, billing record reconciliation and doorstep billing projects. These projects have dramatically improved revenue and cash-flow.

SEWER FLOODING & POLLUTION INCIDENTS
RPS is at the leading edge of the development of both technological and practical support allowing effective, informed and targeted operational and investment decisions to be made for the immediate and longer term. Through our sewerage management planning activities, we can minimise customer contact time through proactive operational interventions or innovative solutions to reduce disruption.

WATER QUALITY
RPS has industry leading experience in understanding the management of water quality. We have undertaken specialist reviews of policy, guidance and methodologies used in the operation and maintenance of water distribution networks and developed best practice documentation (DOMS) and delivered specialist training to support our clients in protecting and improving water quality within the potable water network.

We are experts in the investigation and understanding of Water Quality failures, customer complaints and development of solutions to resolve these.

Our in-house field teams support our clients and contractors through the delivery of best practice mains flushing to clean networks, improve customer satisfaction and minimise the risk of discolouration.

We provide sampling and laboratory analysis and play a key role for a number of water companies in the EA’s Chemical Investigations Programme measuring emerging substances in the water environment to meet the needs of the Priority Substances Directive.

RPS is at the leading edge of the development of both technological and practical support allowing effective, informed and targeted operational and investment decisions to be made for the immediate and longer term.

RPS is a member of the Institute of Customer Service.
LEAKAGE DETECTION
RPS is the leading provider of leakage detection services in the UK water industry. Our field teams are experienced, highly skilled and trained technicians providing the highest levels of accuracy and productivity. They are supported by a comprehensive range of the latest leakage detection technology.

The speed and quality of communication between the field team and the client is optimised through the use of our award-winning mobile working applications, lessening our impact on the environment, minimising leak runtimes and supporting clients’ right first time objectives.

PRESSURE MANAGEMENT
Effective pressure management of water networks reduces both leakage and demand. RPS has the work processes, modelling skills and technology tools required to effectively and efficiently provide the complete range of water pressure management services from scheme identification, cost/benefit evaluation and detailed design to the supervision of control device installation, commissioning, optimisation, maintenance and planned and emergency servicing.

Service quality is assured through our accredited Integrated Management Systems and our acclaimed Waternet™ pressure management application.

DISCOLOURATION
Water supplies can become discoloured, typically through high concentrations of iron and manganese. RPS has comprehensive proven processes for reducing these incidents and agile field teams available across the country to address immediate operational needs.

METER VERIFICATION
The water industry’s need for reliable, accurate and timely data has never been greater. To satisfy the appetite of utilities and regulators alike, we have specialists and meter management applications to enhance stakeholders’ understanding and confidence in the outputs from meter assets; inform best value installation, maintenance and replacement strategies; and address meter uncertainty and under-registration concerns.

Our work processes and technology tools comply with the National Engineering Laboratory (NEL) Guidelines for Auditing Water Flowmetering Systems.

SMART METERS
RPS comprises highly experienced, multi-skilled field engineers tasked with the responsibility of inspecting and maintaining a fleet of approximately 5,000 AMRs for clients across the UK. Our engineers are supported by the latest mobile hardware and an elegant data capturing process which streamlines work on site and optimises progress.

Our water experts will analyse the data generated by the AMRs using our Waternet™ application, studying water usage and highlighting any discrepancies. RPS can use this analysis to proactively offer various water efficiency solutions; from pinpointing leaks and faulty valves to identifying opportunities for installing devices to reduce waste.

RPS is the leading provider of leakage detection services in the UK water industry. RPS comprises highly experienced, multi-skilled field engineers tasked with the responsibility of inspecting and maintaining a fleet of approximately 5,000 AMRs for clients across the UK.
We have developed a number of the latest best practice guidance documents in the field of leakage economics for clients including OFWAT, the Environment Agency and the UK Water Industry Research Council.

In addition to supporting and developing water company business plans, we are dedicated to the successful delivery of these plans. Our tailored outputs and software solutions ensure that high level targets can be achieved efficiently and sustainably. Our full range of office-to-field services provide value solutions and bring expertise, data and knowledge unique to our business.

DEMAND MANAGEMENT OPTIONS

RPS leads the industry in the fields of demand management, water efficiency, leakage reduction and associated forecasting and modelling of a range of climate scenarios. Issues associated with seasonality and climate change are increasingly important and RPS have undertaken a number of studies to understand and forecast scenarios which take account of differences in household demographics and commercial user groups such as agriculture.

Water efficiency and leakage reduction options can help to offset demand and defer larger investments in new supply schemes. Options can include customer metering, active leakage control (ALC), pressure management, and asset renewal. Determination of the least cost mix of options across the network at the level of DMA and programmes for implementation are supported by application of the RPS SALT++ software, which also incorporates supply/demand headroom factors.

SUSTAINABLE POLICY

Our team of economists are skilled in the analysis of company policies and forecasts. The incorporation of external costs and benefits arising from the social and environmental factors are always considered such that results can be considered to be truly sustainable.

CLIMATE CHANGE

Our environmental consultants have a wealth of experience on the impacts of climate change on both leakage and demand. The incorporation of climate related risks to company targets and budgets is often central to the services we offer.

CUSTOMER ENGAGEMENT

Consideration of customer satisfaction is increasingly important and our assessments of customer responses to leakage management activities and decisions can provide added justification to important policies and investments. The evaluation and monitoring of customer satisfaction has proved vital in gauging the success of past and current policies as well as in planning for the future.

SUPPORT AND TRAINING

RPS provides support and training to our clients in the specialist fields of leakage consultancy and economics. This extends from support with auditing to the handover of specialist and bespoke tools and methodologies to clients in support of future projects. We believe this benefits both parties through improved understanding and cooperation which leads to greater creativity and enhanced applications for the services we provide.

RPS is the leading provider of leakage consultancy advice across the water industry. Working closely with industry regulators, we deliver results that both meet and exceed regulatory requirements and expectations. Our aim is to put clients at the forefront of innovation.
RPS provides the highest level of wastewater hydraulic modelling expertise using InfoWorks CS and ICM to help support clients improve customer outcomes through reducing flooding or pollution. Our experienced staff base possesses a comprehensive understanding of modelling and its underlying principles that allow us to exploit current modelling technology to the full. We can deliver real study efficiency and cost savings through our in-house software and data management tools.

**MODEL BUILD AND VERIFICATION**
We supply most UK Water Companies with specialist modelling support, typically through dedicated framework programmes. We have access to all forms of modelling software and actively develop modelling specifications and national best practice to improve client processes. During AMP5 we undertook over 300 individual wastewater model build and verification studies, across the UK, with values ranging from £5k to £2.7m.

**MODEL MAINTENANCE**
Our innovative processes allow clients to efficiently keep models up-to-date and live, utilising automated routines to include network and catchment changes in the model thus increasing the longevity and use of modelling investment.

**NETWORK ANALYSIS**
Through our in-house model output analysis and visualisation software and processes, we are able to use models to allow clients to understand system performance and plan for future impacts such as climate change, growth, creep or asset deterioration.

**INTEGRATED MODELLING**
Integrated modelling requires a full understanding of the urban drainage system and interactions with other fluvial and pluvial systems. We have pioneered innovative approaches to represent these complex problems, and been involved in high profile flooding studies in Hull and Glasgow requiring management and understanding of a variety of stakeholders and regulatory controls.

**DEVELOPER IMPACT ASSESSMENTS**
In response to the pressures on the drainage network from an increase in development and population growth, RPS provides a comprehensive suite of end-to-end support to Developer Services Teams.

**INNOVATIVE WORKING**
Efficient delivery requires employing and developing the best wastewater planners. We run a Post Graduate Certificate in Urban Drainage accredited by University of Derby and aligned with CIWEM UDG’s Core Competencies for our staff and also make this available to clients.

Through developing modelling specifications for most UK Water Companies, we have developed innovative tools to more efficiently build models, communicate verification outputs, understand and quantify model confidence and rapidly simulate overland flow paths in PondSIM™.

RPS is industry leading in supporting sewerage companies to meet customer, service, value for money and operational security challenges. This is underpinned by our expertise in the production of high quality sewer hydraulic models and using them to define wastewater investment strategies.
Integrated tactical and strategic drainage plans are becoming increasingly important to ensure outcomes are delivered through the best long term Totex solution. We have led the development of efficient tools, modelling activities, monitoring and analysis processes and have embedded these within client organisations to enable improved network performance and customer service.

**RISK BASED ASSESSMENTS**

We have developed automated tools and processes to allow the likelihood and consequence of flooding or pollution to be predicted through hydraulic incapacity, or asset failure. These allow short and long term interventions and emergency responses to be prioritised so the optimum return on investment and benefit is obtained.

**ROOT CAUSE ANALYSIS**

This is fundamental to delivering the correct intervention in any risk based catchment strategy. Our modelling and planning processes have been used to efficiently confirm the cause of flood risk, blockage, collapse, pollution risk, hydrogen sulphide attack and high operational carbon production and develop strategies to enhance performance.

**CATCHMENT AND REGIONAL ASSESSMENT**

Our data analysis tools use Company wide historical and model data sets to perform high level risk assessments, allowing catchments to be prioritised and further investigation effort and investment aligned to business risks.

**LIVE OUTPUTS**

In order to keep pace with the changing world, catchment plans must be maintained so that outputs are live and always relevant to the business. We have delivered automatic geocoding, trending and plan generation routines so that historical and model data sets can be processed in real time, rapidly and efficiently, to give up to date outputs for the business to use.

**INNOVATIVE TOOLS**

We have developed tools to rapidly use model data and water company data sets to visualise and communicate proactive outcome-based strategies. Our in-house software PondSIM™ can rapidly prioritise asset failure based on flood consequence to target rehabilitation investment. Our sewer network risk dashboard can prioritise and visualise pre-emptive surveys to proactively reduce blockage and pollution incidents.

**PROACTIVE SEWER MANAGEMENT**

Essential to these proactive management strategies is RPS’ expertise in monitoring and data analysis. As the cost of monitoring gets ever cheaper, opportunities arise to increase the resolution of data collection and use this to build an enhanced picture of performance. WastewaterNet can trend and analyse data to assess current asset performance, pre-empt failure and instigate pro-active operational mitigation.

**RPS lead the way in delivering wastewater strategies to reduce flooding and pollution which are aligned to water company business plans, using industry best practice, innovative tools, highly skilled modelling teams and embracing stakeholder engagement.**
Flood Risk and the Water Environment

FLOOD RISK

RPS offers a full range of professional services in coastal, fluvial, pluvial and water resources assessment and management.

We support clients across private sectors, utilities and government including development of flood risk assessments as part of the planning process and flood management plans supporting the Floods Directive. Our specialist team can support client’s needs from site assessments to catchment wide strategies, offering sustainable engineering solutions to complex flood and water resource problems.

RPS has significant experience in undertaking FRAs and FCAs all over the UK, with a track record of over 300 projects of varying size and complexity.

We offer many years of experience in major projects including:
- Modeling
- Risk Assessment
- Feasibility
- Economic
- Environmental
- Engineering design
- Supervision and project management
- Energy resource
- Morphology and restoration

Our multi-disciplinary nature means that our innovative and holistic solutions embrace hydrology, hydrogeology, hydraulic modelling, geotechnics, economic, ecology, design and planning. We recognise the opportunities to provide social and leisure amenity through water management and endorse community engagement to ensure that solutions developed reflect the requirements of those directly involved.

WATER QUALITY

RPS has proven expertise in catchment studies. Over the past three decades we have successfully completed major water quality projects involving catchment.
- Monitoring
- Modeling
- Management

We offer strategy, planning and project level support using the unique skills of a dedicated team of engineers and environmental scientists. Our skill sets encompass water quality status assessment, environmental pressure analysis, GIS and spatial modelling, dangerous substances screening, objective setting and measures planning.

RPS has a reputation in preparing innovative plans for river basin management under the Water Framework Directive and for the protection of EU priority habitats, species and marine waters.

RPS has a team of experienced ecologists who carry out ecological investigations for a wide range of clients throughout the country. All of our ecologists are members of the Chartered Institute of Ecology and Environmental Management (CIEEM).
RPS provides innovative Drainage Assessment and Design solutions, including conceptual and detailed designs for Sustainable Drainage (SuDS) for a whole range of development types including residential, commercial and industrial for private and public sector clients.

**SUDS DESIGN**

RPS provides a comprehensive design and management consultancy comprising acknowledged experts in the field of Sustainable Drainage. A key aspect to our approach is the selection of the most appropriate and cost effective SuDS techniques to suit specific site constraints. Our aim is to provide systems that manage water, pollution and flooding with reduced construction risks, reduced maintenance requirements and reduced overall costs.

Our design team ensures that project-specific needs are achieved through a combination of technical expertise, practical application of geotechnical engineering, drainage assessment and our long term commitment to ongoing research into the development of SuDS techniques. Our specialist hydraulic modelling capability can be used to fully assess drainage design and optimise the SuDS solutions for large and complex projects.

RPS has a comprehensive track record of providing successful and cost effective SuDS solutions to public and private sector clients throughout the UK. Our SuDS team works with our Flood Risk Assessment and Ecology teams to provide integrated solutions.

- Specialist advice on conceptual designs and planning approval
- Drainage Impact Assessments
- Detailed design and project management of SuDS solutions
- Advice on SuDS management and maintenance systems
- Detailed hydraulic modeling and optimisation of large, complex systems
- Retrofit SuDS design
- Soft landscaped, hard landscaped and hybrid SuDS solutions

**FEASIBILITY AND DRAINAGE DESIGN**

New drainage schemes or improvement schemes represent significant capital expenditure. Before funds are committed it is necessary to investigate and understand the site specific constraints that will determine the most effective solution. Sites and potential solutions can be constrained by ground conditions, existing services, traffic, access, other developments, etc. and these factors must be taken into account.

Fundamentally, this requires a thorough understanding of the problems and project drivers, such as the causes of flooding or sewer capacity restrictions, before any solutions are considered. Performance objectives and the attendant risk of exceedance of the design parameters must be fully considered as part of defining any solutions. Feasibility studies will also consider a number of options that take account of site constraints to ensure that all solutions are pragmatic, practical and buildable.

Our Engineers have an in-depth knowledge of drainage and sewerage issues including hydraulic modelling and problem definition that allows us to understand root causes of problems and develop the most appropriate solutions. Our approach identifies:

- Project drivers and design parameters for the scheme
- Physical, third party and programming constraints
- Practical options to resolve the problems
- Health and Safety advantages/disadvantages between options
- Relative costs of construction and maintenance of options
- Range of multiple benefits delivered

RPS has a long track record of developing innovative SuDS solutions to manage surface waters, reduce flooding and improve the amenity status of development sites.
RPS has teams of experienced ecologists who carry out ecological investigations for a wide range of projects throughout the UK. All of our permanent members of staff are members of the Chartered Institute of Ecology and Environmental Management (CIEEM). We provide creative, innovative and pragmatic ecological solutions designed on a site-by-site basis. We have extensive experience working on all scales of project in all sectors, from design and planning stages through to on site mitigation works and post-development management and monitoring. Our workload is centred on providing support to clients applying for planning permissions and undertaking permitted development works spanning all sectors.

INTEGRATED ECOLOGY TEAMS

The main benefit of working with RPS ecologists is our trusted advice and individual, client-based approach where solutions are offered rather than problems presented. Our staff become integrated members of design teams and advise clients at the early stages of projects to reduce costs and delays in relation to ecological constraints. Through working with the water and wastewater teams, we have increased our footprint in the Water Sector, specialising in delivering both terrestrial and aquatic ecological surveys and site supervision for Water Companies and their contractors.

HABITAT SURVEYS

Our experienced team undertake extended Phase 1 habitat surveys, the industry standard survey to assess ecological conditions on a site, across the UK. Our processes allow all data to be recorded efficiently, with further steps outlined and communicated in clear reporting. We undertake detailed botanical surveys using the National Vegetation Classification (NVC) system. Our team of specialist aquatic ecologists also have significant experience in undertaking river corridor surveys, aquatic invertebrate surveys and Water Framework Directive assessments.

SPECIFIC FAUNA SURVEYS

We have a strong track record in providing a full ranging service of protected fauna surveys including bats, great crested newts, reptiles, wintering birds / breeding birds, badgers, invertebrates, white-clawed crayfish, water vole and otters. We undertake Habitat Suitability Index (HSI) assessments and environmental DNA (eDNA) surveys for great crested newts. We have the capacity to carry out fish and aquatic macrophyte surveys. Our key role is to provide effective mitigation solutions while ensuring the favourable conservation status of protected species.

ECOLOGICAL PLANNING SERVICES

RPS have undertaken a range of surveys and assessments to input into the following regulatory and statutory reporting requirements:

- Mitigation design and licence applications to help secure planning approvals and facilitate development where protected species are present
- Management plans including habitat creation, restoration and enhancement
- Ecological Impact Assessment, either as stand-alone assessments or forming part of Environmental Statements
- Tree surveys to BS 5837:2012 Trees in Relation to Design, Demolition and Construction Recommendations
- Water Framework Directive site assessments and recommendations to ensure “no deterioration”
- Aquatic invertebrate surveys to monitor water quality and design effective mitigation strategies where necessary.
Our services range from GPS data collection and Ground Penetrating Radar studies through to the latest video and mobile laser scanning techniques.

GEODETIC SURVEYING

Land and Structures/Buildings
RPS provides highly trained and well-equipped professional staff to undertake conventional Topographical Surveys, 3D Laser Scanning (static and mobile/Lidar), Building Surveys and Asset Positioning.

Reservoirs, Rivers and Watercourses
We have experience in the provision of detailed Bathymetric Studies of water bodies and watercourses. This enables Hydrology and Flood Risk Modelling using both traditional methods and the very latest in unmanned and autonomous craft to increase safety, productivity and reduce environmental impact.

Pipeline Route Surveys
RPS has significant experience in linear projects and pipeline corridor route surveying across all terrain types, data from which supports the detailed design process.

UNMANNED SURVEYS

As part of its vast surveying service capability, RPS offers in-house Unmanned Aircraft Systems (UAS) services.

Unmanned aircraft are now being used in highly complex, densely populated or high risk environments for surveying purposes. Increasingly, UAS are being used to survey large bodies of water or areas of conservation that traditionally would have required helicopter support or a large team on the surface. This can dramatically reduce time and costs over that of using traditional methods.

Along with UAS surveying projects, RPS offer advice on whether UAS could be used for a particular project as well as provide guidance for safe and compliant flying in accordance with national regulations.

UNDERGROUND ASSET AND SERVICES MAPPING

Utility Location and Mapping
Utility Location and Mapping services provide comprehensive plans of verified utility positions and depths. Our teams are able to deliver surveys to the highest specification encompassing all techniques and equipment types including Ground Penetrating Radar (GPR).

Ground and sub-surface structure
RPS has extensive experience in ground and sub-surface structure investigation using GPR and other recognised specialist techniques to identify ground obstructions and buried plant or structures.

Condition and inspection
We are accomplished in condition and inspection of large diameter pipes and culverts using a combination of confined spaces man entry teams and the latest in unmanned inspection equipment, tailored to suit project challenges and requirements.

Non-regulated business support service
In addition to the above provisions, RPS is also able to support on commercial and industrial sites with specific surveying services, including:
- Internal building services tracing and mapping
- Plant room and plant scanning
- Mapping services to support BIM
- Utility network GIS modelling

Our business has significant experience of providing a wide range of surveying services to support both the water and commercial sectors.
We own and operate a fleet of the latest specialist equipment for wastewater network data collection supporting common regulatory challenges of customer service, value for money and operational security. All our surveyors are fully trained in Confined Space Entry.

**SEWER FLOW SURVEY & RAINFALL MONITORING**

We understand the importance of flow monitoring to the client’s modelling, investment planning and design needs. We can carry out:
- Short and long term sewer flow monitoring and data assessment
- Open channel flow monitoring
- Closed pipe flow monitoring
- Rainfall data collection and radar data calibration

Our in-house data management tools and processes ensure data confidence and our real-time data visualisation platforms allow decisions to be made efficiently in modelling studies or network management operations.

**SEWER NETWORK SURVEYS**

Our experienced asset survey teams provide the following survey services across the UK:
- Manhole Surveys to STC25
- CSO surveys
- CCTV surveys
- Pumping Station Surveys
- Pump Testing
- Impermeable Area Surveys
- Utility Mapping (GPR)
- Topographical surveys
- 3D Laser Scanning

**CUSTOMER SERVICES**

We recognise that delivering excellent customer service is a priority for our clients. We achieve this through extensive customer service training of our surveyors as well as helping clients by:
- Customer surveys
- Drainage Mapping - Surface Water Charge assessment
- Expert Witness

**WATER QUALITY**

We have integrated laboratory and survey services to provide clients with a full water quality testing solution through:
- Surveys and Analysis
- Chemical Improvement Programme studies
- Sample collection and analysis at RPS laboratories
- WwTW Process Improvement studies
- Flow and Load surveys including sample analysis
- Contaminated Surface Water tracing studies
- Polluted Surface Water Outfall resolution
- Low cost CSO / sewerage depth monitoring

**INTEGRATED SURVEY AND MODELLING SERVICES**

RPS is a unique organisation that can provide a truly integrated wastewater network modelling and surveying service, having the ability to deliver all aspects of a wastewater modelling study from our in-house teams. Combining modelling and surveying elements into a single integrated commission can realise significant efficiency and programme benefits, with responsibility for managing the survey programme, data quality, cost, and health and safety, contained within a single delivery team comprising surveyors and modellers.
RPS has a long history of providing Information Management Solutions to the water industry. These solutions are developed to improve the accuracy, reliability and timeliness of data within our client organisations and incorporate innovative approaches to apply UK best practice to regulatory and operational reporting.

**WATER MANAGEMENT**

RPS Waternet™ is a spatial asset management reporting and analysis tool typically used for the regulatory reporting of leakage and sewer flooding. It integrates and validates data from a number of key corporate datasets and applies diagnostics to provide tabular, graphical and spatial reports that align with the reporting requirements of regulators.

RPS Waternet™ is able to analyse and present water demand throughout the distribution network from source works to customer meters by way of an asset structure displayed on a navigation tree view. Applying UK best practice and in compliance with regulatory requirements, reports can be produced for a number of criteria including leakage, pressure, interruptions to supply, customer contacts and water quality failures.

Employing a fully automated data capture and validation tool, this reliable, accurate and transparent reporting system can subsequently be used for developing strategy and policy in a number of key areas of water management including production of Business Plans, SIM Improvements, Water Efficiency Planning, Demand Forecasting, Distribution, Operation and Maintenance Strategies (DOMS) and SELL for business planning.

**SEWER NETWORK MANAGEMENT**

RPS specialise in monitoring, data analysis and operational support to improve wastewater network management.

Similar to our water system, our wastewater reporting system, RPS Wastewaternet and PondSIM™ organise company assets and data by catchment area. Asset data is collated and stored for impermeable areas, wastewater treatment works, wastewater pumping stations, combined sewer overflows, wastewater tanks and outfalls.

The RPS Wastewaternet system will improve sewer management and maintenance through enhanced assembly, collection, recording and presentation of sewer network data.

Time series data from wastewater flow monitoring, rainfall monitoring, wastewater levels, pumping station monitoring and CSO monitoring can be imported and validated and used to produce serviceability reports and event monitoring for customer contacts, blockages, flooding, odour, pollution and collapses and develop proactive operational intervention strategies.

**Innovative Software Solutions**

RPS helps clients achieve customer outcomes and meet efficiency challenges through developing innovative software and tools to better analyse, interrogate, visualise and communicate environmental data.
Design

WATER NETWORKS
RPS provides design services across the full range of water networks assets, supporting water utilities, contractors and private clients to maintain and improve their assets to meet regulatory and customer service targets. We have extensive experience in scheme investigation, optioneering and design to provide the most appropriate solutions for our clients and their customers. This experience includes design of new, rehabilitated and replacement water mains, meters and valves; in addition to improved network operation and optimisation.

Our unique combination of office-based design and site-based operational experience allows us to provide an unrivalled service to our clients. This includes additional services outside of traditional design such as asset surveys, construction planning and support, asset commissioning and ‘as-laid’ measurement and drawing.

WASTEWATER NETWORKS
RPS has extensive experience in the design of wastewater networks, both in terms of rehabilitation of existing assets to improve customer service issues such as flooding, and in the provision of new assets to resolve capacity concerns or service new developments. Our wider expertise in surveying, hydraulic analysis and structural engineering complements our design teams to provide a complete service for our clients, covering not only the design of these types of projects but management of the project development, construction and commissioning stages.

HYDRAULIC MODELLING
Our hydraulic modelling experience encompasses model construction and calibration, rehabilitation design, asset capacity, rationalisation and optimisation investigations, development impact assessment, operational investigations and contingency planning. We utilise hydraulic models to undertake optioneering studies and scenario planning, and to support our design teams in developing the most appropriate cost-effective solutions to protect existing customers and infrastructure.

NEW CONNECTIONS
RPS offers a comprehensive service which supports our clients in the planning, design and management of new water and wastewater connections to the public water and drainage networks. This service includes support through the application and approvals process required, detailed design of new connections, CDM and project management through the construction process.

We hold WIRS accreditation for our design and project management services, ensuring a high level of service is provided and maintained.

We also undertake the design and project management of new private water mains and sewer installations, providing an end-to-end service for private clients and developers.
RPS has a wealth of experience in helping with the development of company business plans, water resources management plans and drought plans. We are unique in being able to provide a full range of office-to-field services, from strategy and policy development to developing and applying operational methods, models and practices.

**WATER RESOURCES**
RPS has knowledge across all the disciplines required for water resources management. For example, we can integrate the supply-demand options appraisal process into the models we use for wider water resource management via our state-of-the-art software tools such as Waternet™.

**POLICY**
RPS has industry leading experience in metering policies, leakage studies and water efficiency. We have undertaken specialist reviews of national and international policies, guidance and methods used in water resources planning; developed good practice approaches; and delivered specialist training.

**FORECASTING**
RPS has a track record in developing state-of-the-art tools for demand forecasting. We also have comprehensive knowledge of regulatory requirements, practical experience and second-to-none modelling and analytical skills. We can therefore provide the whole package: gather and analyse the information required from monitoring, customer surveys or review of published data; build a bespoke model; and develop the forecast.

**WATER EFFICIENCY**
Our expertise in managing demand for water allows us to offer services in cost-effective water efficiency improvements, compliance with standards, sourcing of water efficient products, assessment of costs and benefits of water efficiency.

**TOTAL RESOURCE EFFICIENCY**
Best results are achieved if water efficiency forms an integral part of a wider resource efficiency initiative that also includes energy and waste reduction. RPS can offer an integrated resource efficiency service tailored to your individual requirements.

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**Water Resources and Efficiency**

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