RSK is proud to have become one of the UK’s leading multidisciplinary environmental consultancies and one of the fastest growing and most respected companies of its kind in Europe.
RSK is an international organisation with more than 2300 staff working out of offices across Europe, Africa and the Middle East. We have built a business that is known for delivering services to the highest standard, and, because of our technical excellence, the world’s most demanding clients make use of our services time and time again.

RSK is a recognised leader in the UK property sector and has representatives on major legislative committees and strong credentials with blue-chip clients.

We make it easy for our construction clients by offering all the environmental services they need under one roof, from initial pre-acquisition surveys and site assessments, through planning, design and construction, to post-project environmental management and validation. Our teams of specialists work closely with developers and help to negotiate the best deals on the purchase of sites; advise on planning and social issues; implement land remediation programmes; manage health, safety and environment issues during construction; and assist with sustainable design solutions. According to our customers, having access to this umbrella of services cuts their management time and costs, streamlines the development process and improves their return on investment.

Over the past few years, the global economic downturn has affected everyone, but RSK has weathered the storm and succeeded where others have failed.

Perhaps that is because we build close relationships with our clients and recognise the pressures on them and the need for our consultants to respond quickly and for services to be of the highest standard. As we begin to see an upturn in property and construction projects, our business is well placed and ready to support the industry.

We hope that our vision, expertise and work ethic will encourage you to trust us with your business.

WE HAVE HIGHLY QUALIFIED PROFESSIONAL CONSULTANTS WHO DELIVER OUTSTANDING RESULTS.
INTRODUCTION

In 1990, we set out the long-term vision for the company: to provide outstanding consultancy services from an excellent working environment by being well-motivated, ambitious and enthusiastic professionals. This vision encapsulated our plans and ambitions, and was a clear statement of intent from which we have never deviated.

RSK is headquartered in the UK and has built up a network of international offices across Europe, Africa and the Middle East. The contribution from these established offices worldwide is expected to grow significantly over the next five years.

We have highly qualified professional consultants who deliver outstanding results and are often called as expert witnesses for public inquiries on construction and environmental issues.

Our experts are skilled at construction design and management (CDM) advice; implementing client health and safety management systems; delivering behaviour-based safety training; and undertaking competence assessments and contractor audits during construction.

Everything we do is underpinned by a commitment to quality, environmental, health and safety excellence, as typified by our certification to the ISO 9001, ISO 14001 and OHSAS 18001 standards. RSK has received prestigious awards, including Ground Engineering’s Ground Investigation Specialist of the Year and the Brownfield Briefing award for Best Public Participation, which are testimonies to our high standards in the construction industry.

SINCE 1989, WE HAVE BEEN HELPING ORGANISATIONS ACROSS THE WORLD REALISE THEIR BUSINESS GOALS EFFICIENTLY, COST-EFFECTIVELY AND WITH THE MINIMUM OF ENVIRONMENTAL AND SOCIAL IMPACT.
RSK is an evolving business entity: we change with the times to offer services that directly respond to or pre-empt global conditions and legislative drivers. We are proud to provide strategic guidance on the emerging policy issues that are shaping building regulations and planning before they come into force. Negotiations with statutory service authorities for supplies to new developments; flood risk assessments; and infrastructure master planning to support planning applications are all part of our service. We are widely acknowledged for our ability to handle planning and permitting issues. We utilise our in-house drilling, geophysical survey and utilities clearance teams. We provide asbestos surveys on sites before demolition and also undertake site investigations into asbestos contamination of soil and demolition waste. Energy audits are also offered for existing buildings to deliver cost-effective upgrades or enhancements to improve energy or energy performance certificate ratings. Along with its specialist in-house communication team, RSK can offer a complete stakeholder engagement and community consultation service for the construction industry.

**THE BREADTH OF OUR EXPERIENCE, THE DEPTH OF OUR PROFESSIONAL AND TECHNICAL EXCELLENCE, AND THE GLOBAL REACH OF OUR OPERATIONS ENABLE US TO WORK ON THE MOST COMPLEX OF PROJECTS AND FOR THE MOST DEMANDING OF CLIENTS.**
RSK is an evolving business entity: we change with the times to offer services that directly respond to or pre-empt global conditions and legislative drivers. All our services are highly consultative and focus on delivering solutions rather than just amassing hard data and undertaking box-ticking exercises.

Archaeological services
- Risk appraisals
- Heritage statements
- Desk-based archaeology assessments
- Historic building surveys
- Geophysical surveys
- Environmental impact assessments
- Site investigations
- Mitigation strategies
- Post-excavation analyses
- Publications and presentations

Built environment
- Optimisation of building fabric performance on new and existing buildings (heat, air, acoustic and moisture flows)
- Building regulation compliance
  - Conservation of heat and power
  - Ventilation
  - Control of condensation
- Simplified building energy model (SBEM) and standard assessment procedure (SAP) compliance calculations
- Domestic and non-domestic energy performance certificates (EPC)
- Testing
  - Air leakage
  - Infrared thermography
  - Acoustic (environmental, airborne and impact sound)
  - Temperature and humidity monitoring
  - In situ U-value measurement
- Investigation of building fabric failure
- Expert witness services

Carbon and sustainability
- Construction materials evaluation and quality control and quality assurance testing
- Steelwork fabrication, weld and paint inspection
- Carbon footprinting (organisations, products and events)
- Carbon management
- Carbon reporting (voluntary and mandatory)
- Third-party greenhouse gas validation and verification
- Climate change mitigation
- Climate change adaptation and resilience
- Planning and masterplanning support
- Training
- Workshop facilitation

Civil and structural engineering
- Pre-purchase infrastructure and engineering assessments for land acquisition
- Drainage design and sustainable drainage systems
- Flood risk assessment and alleviation
- Highways design
- Structural design and foundation engineering
- Structural investigation consultancy
- Demolition management
- Digital ground modelling and earthworks specifications
- Negotiations for the supply of services to development sites

Business solutions
- Bespoke software development and support
- Commercial off-the-shelf solutions: customer relationship management (CRM) and online time sheets
- Data entry and data capture solutions
- Offshore IT development services
- Business process outsourcing (BPO)
- IT systems implementation and support
- Project management
- Training and consultancy services
- Project risk modelling
- Information and communications technology (ICT) management
- Railway risk management

Communication and technical editing
- Communication consultancy
- Branding and marketing
Development solutions

Land appraisal
- Utility searches
- Foundation options
- Remediation options
- Drainage strategies
- Site logistics
- Demolition advice
- Constraints plans
- Analysis of strengths, weaknesses, opportunities and threats, and hazard identification
- Land use
- Technical reports

Conceptual design
- Space and efficiency overviews
- Advice on site-specific components
- Analysis of construction methods
- Value engineering
- Internal layout considerations
- Sustainability awareness and design
- Code for Sustainable Homes and BREEAM pre-assessment, and pre-planning meetings

Planning support
- Design team meetings
- Community engagement
- Public exhibitions
- Appointment of consultants
- Coordination of project consultants
- Project lead in programmes
- Comprehensive environmental impact assessment support
- Civil and structural engineering, including flood risk assessments and sustainable drainage system reviews

Design/tender process
- Construction design and management (CDM) guidance
- Design programmes
- Coordination of project consultants
- Timely issue of design packages
- Assessment of contractor competence
- Evaluation of tender documentation
- Service applications and/or disconnections
- Detailed design of remediation and civil and structural engineering

Site start
- CDM principal designer role
- Building Regulations, sections 38 and 104 approval
- Pre-contract meetings
- Site supervision and watching briefs
- Discharge of planning consents
- Construction environmental management plans
- Public relations and liaison with statutory bodies and stakeholders

Ecological services
- Ecological surveys
- Protected species surveys
- Invertebrate surveys
- Botanical surveys
- Invasive plant surveys
- Protected species licensing
- Ecological mitigation and habitat enhancement
- Ecological input to Code for Sustainable Homes and BREEAM assessments
- Conservation management plans
- Ecological impact assessments
- Environmental and social impact assessments
- Social impact assessments
- Ecological site supervision
- Specialist ecological survey techniques, for example, tree climbing inspections, entry into confined spaces and radio tracking
- Ecological geographic information systems
- Arboricultural services
- Habitat management

Contaminated land and brownfield redevelopment
- Strategic advice encompassing all elements of brownfield regeneration
- Site investigations and assessments, including quantitative risk assessments
- Remediation options appraisals and design
- Remediation cost–benefit analyses
- Sustainable brownfield regeneration
- Turnkey remediation contracting
- Production of land condition records (LCR)
- Site investigation contracting
- Drilling services
- Soil, rock and materials laboratory testing
- Contaminated soil management
- Monitoring of polluted ground and groundwater
- Materials management
- Waste permitting

Corporate environmental management
- Environmental management systems development and implementation (ISO 14001)
- Aspect and impact assessments
- Legal and compliance assistance
- Due diligence
- Environmental auditing and reporting
- Supply chain assessments
- Waste minimisation and management
SERVICES

Environmental, health and safety training
- Full range of environmental, health and safety training and facilitation programmes
- Introductory level to advanced training courses
- Courses accredited and internationally recognised by IEMA, IRCA, IOSH and NEBOSH
- Standard solutions for public and in-house delivery
- Bespoke solutions for in-house delivery
- Experienced and practical tutors

Environmental and social impact and design services

Environmental impact and design services
- Archaeology and cultural heritage assessments
- Ecological mitigation and habitat enhancement
- Feasibility studies
- Scoping studies
- Strategic environmental assessments
- Environmental impact assessments (EIA)
- Landscape design and masterplanning
- Environmental consents and planning applications
- Environmental site supervision
- Geographic information systems
- Marine (biological, geological, geophysical and geotechnical) services
- Pre- and post-application consultations
- Aerial survey and mapping
- Air quality and climate assessment modelling
- Noise and vibration surveys and assessments
- Environmental site supervision and pollution monitoring
- Landscape and visual impact assessments
- Landscape design and management

Social baseline studies
- Human rights impact studies
- Natural resource use studies
- Indigenous people studies
- Intangible cultural heritage studies
- Ecosystem services impacts studies

Social management plans
- Social mitigation plans
- Social monitoring plans

Resettlement action plans
Influx management plans
Community development plans and livelihood restoration plans
Local recruitment plans
Indigenous people plans

Corporate responsibility plans and programmes (social aspects)

Stakeholder engagement plans
Social due diligence assessments

Environmental monitoring and data services
- Monitoring in accordance with Environmental Permitting Regulations
- Secure, traceable and expedient delivery of audited data
- Gas, water and leachate sampling
- PM10 metals, polycyclic aromatic hydrocarbons and dust measurement
- Installation and operation of fixed dust gauges
- Design and implementation of flame- and photoionisation and flux surveys
- Assessment of fugitive emissions: low concentration hydrogen sulphide
- Trace volatile organic compound sampling and analysis (thermal desorption)
- Gas source investigation – stable carbon isotope \(^{12}C:^{13}C\) measurement
- Data qualification and presentation: GIS plots, compliance notification reports and web interfaces
- Real-time air quality monitoring for sensitive developments and remediation projects

Geomatics and aerial surveys
- High-resolution imaging, lidar, 3D scanning, multispectral imaging and HD video
- UAV, helicopter and fixed-wing services
- Aerial surveys, inspection and mapping for:
  - Power lines
  - Pipelines
  - Rail- and tramways
  - Roads and highways
  - Telecommunications
  - Coasts and waterways
  - Off- and onshore wind farms
  - Environmental monitoring
  - Marketing and public relations images and videos
  - 3D visualisation and augmented reality

Ground engineering
- Earthworks and slope engineering
- Geophysical surveys, including ground-penetrating radar
- Geotechnical consultancy and design
- 2D and 3D ground deformation modelling
- Soil-structure instrumentation and monitoring
- Seismic risk assessment and design
- Value engineering and temporary works design

Health and safety
- Policy (management system) development and implementation
- Occupational health services
- Occupational hygiene
- Hazard identification and risk management
- Construction design and management (CDM) advice and competence assessments
- Control of contractor safety (supply chain management)
- Compliance audits, surveys and inspections
- Asbestos risk assessment and management (site surveys, supervision and clearance testing)
- Competent body support and advisory service
- Legionella risk assessment and management
- Emergency and business recovery planning
Multidisciplinary construction and railway construction environmental, health and safety support
Accident and incident investigation
Employee competency management

Heritage materials and structures
On-site
- Designated non-destructive testing and/or materials sampling of historic buildings and sensitive sites
- UKAS-accredited site sampling teams
- Professional investigation and testing services
- Rope-access techniques for difficult access situations

Material fabric assessments
- Visual surveys by specialist inspectors
- Non-destructive testing
- Borescope surveys
- Dye testing for identification of surface cracking
- Petrographic examinations of constituent materials
- Chemical analysis for deleterious materials
- Monitoring of deterioration mechanisms
- Conservation materials evaluation and matching
- Investigations of historic building materials, including stone, slate, brick, mortar, concrete, terracotta, plaster, render, paint and timber

Laboratory techniques
- Microscopy
- Photospectrometry
- Wet chemical analysis
- Scanning electron microscopy and microanalysis
- X-ray diffraction
- X-ray fluorescence analysis
- Infrared analysis
- Gas chromatography
- Thermal analysis
- Laser ion mass surface analysis

Laboratory services
- UKAS-accredited soils testing to ISO 17025
- UKAS-accredited organic and inorganic laboratory analysis
- UKAS-accredited asbestos sample analysis

MCERTS accreditation
Supply of sampling media and equipment
Technical support
Expert witness
Shrinkability and classification of soils
Compaction and shear strength testing
Effective stress, large and small shear box and ring shear test facilities
Rock testing

Waste management
- Resource efficiency audits
- Duty of care assessment and compliance
- Environmental Permitting Regulations permitting and exemptions
- Work management strategies

Water services
Drinking water and waste water infrastructure management
- Modelling and performance assessments
- Operational management and maintenance planning
- Infrastructure development

Flooding
- Flood risk assessments
- Strategic flood risk assessments
- Flood planning and emergency response
- River modelling and topographical surveys

Water resources
- Hydrological assessments and catchment analyses
- Low-flow studies
- Hydrogeological assessments
- Supply demand planning
- Capacity and resource management

Water quality
- Water quality assessments
- Potable and waste-water treatment process support
- Monitoring and analysis

Asset management
- Investment planning and delivery
- Strategic risk assessments
- Strategy development
- Data acquisition and analysis
- Asset condition surveys

Water Framework Directive
- Economic modelling and evaluation
- Environmental impact assessments

Long-term monitoring
- Surface and groundwater monitoring
- Telemetry
- Sampling network design and installation
- Data retrieval, processing and analysis

Permitting
- Permitting applications for installations, mobile plant, surface and ground discharges and waste operations
- Air quality and emission impact assessments
- Definition of best available techniques (BAT)
- Compliance auditing
- Greenhouse gas and EU ETS services
- COMAH safety report

Transport planning
- Transport assessments and statements
- Travel plans
- Feasibility appraisals
- Car parking assessment
- Swept path analysis
SUPPORTING THE CONSTRUCTION INDUSTRY

PEOPLE

AT RSK, WE HAVE HIGHLY QUALIFIED PROFESSIONAL CONSULTANTS WHO DELIVER OUTSTANDING RESULTS FOR DEMANDING CLIENTS IN THE CONSTRUCTION INDUSTRY.

Peter Witherington, engineer – ground investigation and remediation
With over 35 years’ experience, Peter is a recognised expert in the area of remediation and brownfield development, and sits on several government panels that review UK policy and guidance. Peter’s technical role in RSK focuses on the property sector. He has worked with the National House Building Council (NHBC) on developing its standard for hazard management, which covers geotechnical and contamination problems associated with new developments.

Warren Percival, scientist – management systems and audits
Warren has worked in the consultancy market with a variety of industry sectors for multinationals and small to medium-size enterprises. His experience covers the development and implementation of environmental, quality, health and safety management systems to international standards. Warren is an experienced and registered auditor with the Institute of Environmental Management and Assessment (IEMA).

Ian Sims, scientist – world expert in concrete and building materials
Ian has responsibility to the RSK board for materials consultancy and expert witness services, including the panel of specialist consultants. He has authored and co-authored over 200 conference and journal papers, articles, working party reports, presentations and lectures. Based on his experience, Ian actively participated in the development of all the alkali-aggregate reaction (AAR) and related guidance published in the UK, variously by the Concrete Society, the British Cement Association, the Building Research Establishment, the Institution of Structural Engineers, the Geological Society and, of course, the British Standards Institution.
Nick Selves, scientist, and Stuart Borland (based in Scotland), architect – specialists in energy and buildings

Nick and Stuart are involved with inspections, investigations and providing expert services on building envelope performance, assembly failures and material defects. They conduct site audits and undertake calculations for new building energy consumption and carbon dioxide emissions with regard to Building Regulation compliance. Nick and Stuart are experienced in product development, investigation and technical writing on behalf of building component manufacturers and trade bodies.

Jenny Wilson, landscape architect – specialist in visual impact and landscape design

Jenny has over 15 years’ experience of providing expert witness evidence on landscape and visual impact at public inquiries for a wide range of developments that have resulted in the successful granting of planning consent.

Richard Carter, scientist – ecologist of world renown

Richard has conducted and managed botanical and habitat surveys in most parts of the UK and in most UK habitat types. He has overseen ecology on major EIA projects, from initial scoping surveys, through writing environmental statements to preparing proof of evidence for public inquiries or Parliament. Richard contributed to the development of EIA best-practice guidelines for organisations such as Natural England.

Simon Jackman, scientist – remediation of contaminated land

Simon is involved in projects concerning the investigation of contaminated land for reclamation and redevelopment, groundwater remediation, site supervision and audit of remediation works, and health and safety. He has specialist skills in areas including the design of various in situ remediation systems, ex situ remediation projects and geoenvironmental investigation and logging in accordance with BS 5930.

John Lawrence, engineer – ground investigation

John directs teams of geotechnical and geoenvironmental engineers, laboratory staff and drilling crews. During his career, he has had direct responsibility for the management of several hundred site and ground investigations. John’s specialist skills include geotechnical engineering, design management and project management.

Stephen Mackereth, engineer – ground investigation

Stephen oversees the running of RSK’s in-house soils laboratory, the plant and site work element of the company’s operation. He has overseen large site investigations and has been involved with contract tendering and marketing. Stephen has worked on a variety of schemes ranging from house subsidence to cliff stability assessments and investigations for new roads. He specialises in in-shore overwater investigations.

Shon Williams, engineer – specialist in geotechnical engineering

Shon has specialised for much of his recent career in the field of geotechnical engineering, although he gained chartered status through the design of bridges and buildings at Sir Owen Williams and Partners. During his career, Shon has been involved with the design of many infrastructure projects, including airports, bridges, buildings, embankment dams, highways, pipelines, ports, power stations, railways and tunnels.

Peter Russell, engineer – major projects

Peter leads teams of design and site supervision staff in remediating sites identified as contaminated land. He has acted as the engineer (Institution of Civil Engineering, ICE, contracts) and project manager (NEC3) on several multidisciplinary projects. Peter works closely with project sponsors and stakeholders to comply with Official Journal of the European Union procedures, prepare procurement strategies and manage the tendering and implementation of contracts to project programmes and budgets.

James Blake, chartered environmentalist – carbon and sustainability

James manages RSK’s carbon and sustainability team and has over 20 years’ experience of supporting the construction sector. James has particular expertise in environmental sustainability, energy and carbon dioxide emissions performance, including energy efficiency, renewable and low-carbon energy technologies. He takes pride in the commercially focused sustainable and low-carbon solutions delivered by his team across various development sectors, including residential, commercial, education, healthcare, energy and transport.
Lucy Thomas, scientist – risk assessment and contaminated land
Lucy specialises in environmental consulting, including the design, investigation and risk assessment of contaminated land. Her skills include the design of land quality assessments, human health quantitative risk assessment using CLEA, RBCA and RISC, water environment risk assessment using RTM and CONSIM, and landfill risk assessment using LANDSIM. Lucy has worked for property developers, waste management companies, local authorities and the NHBC.

Danny Bird, scientist – risk assessment and IT systems
Danny has significant project management experience of a wide variety of work streams, including risk management, health and safety, and software solutions. He has responsibility for the strategic direction and delivery of the following business work streams: IT systems development and support, ICT management, risk modelling and operational railway risk assessment.

Stella Whyte, scientist – communications and stakeholder engagement
Stella manages major projects for companies in sectors such as construction, infrastructure development, remediation, oil and gas, and renewable energy. She works closely with clients to identify strategies, develop work plans, schedule and deliver to project milestones, control costs and oversee the quality management and delivery of communication programmes and key collateral. Her particular areas of professional expertise include strategic communications planning, stakeholder engagement and the dissemination of key information and marketing messages.

George Tuckwell, scientist – geophysics and acoustics
George is responsible for the scoping and design of surveys, field surveys and data collection using the full range of available geophysical survey and geospatial location techniques, data storage, collation and processing, and data presentation, including 2D and 3D imaging. He is heavily involved in project work and undertakes non-destructive testing, geophysical site investigation and expert witness projects across the spectrum of applications for ground and structures.

Gareth Jones, chartered engineer – materials and structures
Gareth directs the materials and structures team and provides structural services to a broad range of public and private sector clients. He has specialist skills in civil engineering design and construction; inspection, investigation and testing of transportation structures and other infrastructure assets; investigative engineering and structural assessments; and condition assessment of construction materials in service, particularly concrete and steel. He also gives expert advice on roofing, cladding and masonry.
AWARDS AND ACCOLADES

Everything we do is underpinned by a commitment to quality, environmental, health and safety excellence

RSK is proud to be one of the few environmental consultancies worldwide to have achieved certification to the ISO 9001, ISO 14001 and OHSAS 18001 standards for quality, environment and health and safety management. We have regional memberships for Constructing Excellence. We are approved by Constructionline, the UK’s register of pre-qualified local and national construction and construction-related contractors and consultants. We view these and our other accreditations as a starting point and continually seek to surpass the accreditation standards.

- 2017 – WICE Awards, Best Woman Consultant (Roseanna Bloxham, senior consultant)
- 2017 – Double win at Ground Engineering Awards for Structural Soils: Ground Investigation Project with a Geotechnical Value of over £500,000, and the Health and Safety Award
- 2017 – RSK shortlisted as NCE 100 Technology Trailblazer
- 2017 – Ground Engineering Geotechnical Services File, ranked ninth geotechnical consultancy
- 2016 – Queen’s Award for Enterprise in international trade
- 2016 – Ground Engineering Awards, Highly Commended for Ground Investigation Project of the Year
- 2016 – Considerate Constructors Scheme National Site Award, Silver (as part of the Carillion–Buckingham Joint Venture team working on East West Rail, Phase 1)
- 2016 – Considerate Constructors Scheme National Site Award, Bronze (as part of the Balfour Beatty team working on the Crossrail Western Outer Track Infrastructure project)
- 2016 – Shortlisted for Construction Investing in Talent Award
- 2016 – 42nd on Sunday Times HSBC International Track 200
- 2015 – Ground Engineering Awards 2015, Ground Investigation Project of the Year (Structural Soils)
- 2015 – Shell Q4 2014 Cost Savings Award
- 2014 – Shell Q4 Goal Zero Hero Award
- 2014 – EBJ Silver Award for large firms
- 2014 – HSSE award, SIPD, Majnoon
- 2014 – BREEAM Assessor of the Year
- 2013 – Safety Champion Award, Shell Global Contractors Safety Council (RSK Benelux)
- 2013 – Shell Cost Benefit Award (Q2)
- 2013 – Shell HSSE award for positive intervention (Q1)
- 2012/13 – two National Grid SHE awards
- 2012 – HSSE BP Award
- 2012 – HSSE award for positive intervention (Alenco, Hungary)
- 2012 – HSSE award and best cost-saving performance award from Shell
- 2012 – Construction Excellence Awards, CL:AIRE Waste Code of Practice Award – highly commended
- 2012 - Brownfield Briefing Awards, Best Scoping or Operation of a Site Investigation – highly commended
- 2012 – BREEAM Awards Wales, further education category

Certifications, accreditations, registrations and memberships
Exemplary performance and innovative thinking in safety, health and environmental matters are the foundations on which we run our business. Accordingly, RSK has become the UK’s first environmental consultancy to introduce a behaviour-based human performance programme.

Seamlessly integrating with our existing safety, health, environment and quality management system, this programme will establish a continuously improving culture of behaviour-based human performance across the company. RSK director Phil DeFoggi is leading the initiative, which draws on experience that he gained while managing human performance programmes in the US nuclear industry.

Behaviour-based human performance programmes are common among Fortune 500 companies, and it seems likely that increasingly rigorous legislation will prompt many EU businesses and organisations to find new ways to minimise risk and improve health and safety performance at the project level.

RSK’s approach to the issue is unique in that it incorporates human and environmental factors: protecting the employee from the environment and the environment from the employee. The human performance programme is rooted in the principles that humans are fallible and that organisational processes, leadership and increased understanding can predict and mitigate error-prone situations. The programme is applicable to every business area and outlines a set of universal philosophies and tools to effect work-based behavioural improvements.

RSK has been awarded several health, safety and environment awards from various clients. Please see page 13 for our most recent awards.
RSK places a high priority on delivering high-quality, integrated services, as seen in the following examples.

ERM–Temple Group commissioned RSK as part of a consortium framework (working for HS2 Ltd) to provide landscape and visual impact assessment services for the Country South section of the proposed HS2 rail link between London and the West Midlands.

The scope of services included desktop baseline assessments, site surveys and writing up the landscape and visual assessments. Site work covered capturing winter and summer viewpoint photography across an extensive area of countryside to the east of Banbury. The coordination work included public consultation on the draft content of the environmental statement and internal design workshops to refine design layouts and mitigation treatments.

The assessment ran for 17 months from May 2012 to October 2013 and required a fast turnaround and a responsive approach to accommodate the demands of an extensive multidisciplinary, multi-tier team-working environment.

The process resulted in the successful delivery of the landscape and visual impact assessment that formed part of the formal environmental statement submitted in support of the HS2 Hybrid Bill application.

A large proportion of Taylor Wimpey’s developments are on brownfield sites where some form of land remediation is required. The Taylor Wimpey business units did not have the in-house resources or the time to assess remediation contractors fully to determine their experience before appointment and had encountered situations where the most effective technique was not being used owing to lack of knowledge of available techniques and contractors.

RSK developed an assessment process to review contractors’ capabilities in terms of expertise, experience and resources in addition to reviewing their environmental, health, safety and quality performance.

The rapid assessment of remediation contracts

A questionnaire was drawn up to request details of previous experience in each technique identified by the contractor and a detailed case study for one remediation project to provide evidence of the environmental, health, safety and quality systems described.

The assessment score, contact details, techniques provided (and experience) and insurance details were presented in a matrix accessible to all the companies to assist when inviting contractors to tender.

The system also enabled Taylor Wimpey’s experience of working with individual contractors to be collated and shared with the entire organisation.

The output provided Taylor Wimpey with reassurance that the contractors it was dealing with were competent in the techniques to be discussed while removing the burden of the assessment process and therefore releasing internal resources for other tasks.
PROJECT CASE STUDIES

RESIDENTIAL PROPERTY RISK ASSESSMENTS FOR WAVERLEY BOROUGH COUNCIL, UK

Waverley Borough Council’s housing maintenance department appointed RSK to carry out risk assessments of all of its residential properties to make employees, contractors and residents aware of any hazards and mitigate the risks. These assessments had previously been carried out and delivered in paper format, which made it difficult for the housing maintenance department to manage the mitigation actions and make everyone aware of the risks.

RSK devised a database that enabled the risk assessments to be stored and searched by location, ranking or persons affected by the risk. It enabled mitigation measures to be prioritised and an action plan to be drawn up. Reports could be emailed to the relevant employees or contractors if work was to be carried out at a specific residence.

RSK has been providing auditing and planning supervision services to the council since 2000 under a framework agreement for health and safety advice and planning supervision for construction projects.

RSK has a framework agreement for planning supervision and health and safety advice for the housing department’s construction projects on empty and occupied residential properties and ensuring contractor-tenant liaison on health and safety issues. Projects have included asbestos removal, demolition, underpinning and refurbishment. We also developed a system for managing maintenance projects.

CONSTRUCTION DESIGN AND MANAGEMENT WORK FOR NATIONAL GRID PROPERTY, UK

RSK has been providing construction design and management (CDM) coordination* and compliance support to National Grid Property Ltd on major update schemes throughout several areas of the UK for over 10 years.

RSK has worked on more than 200 projects with a capital value in excess of £400 million. Our principal demolition experience with National Grid Property has been working as CDM coordinators and compliance assessors on various projects. Some examples include

- Nottingham gasholder demolition, 2010, value £2 million
- Southport MAN gasholder demolition, 2009, value £2.5 million
- Edinburgh gasholder demolition, 2005, value £1.5 million
- Skegness call centre demolition, 2010, value £0.35 million
- Hull distribution centre demolition, 2009, value £0.5 million
- Keighley gas depot demolition, 2009, value £0.8 million
- Connah’s Quay depot demolition, 2009, value £1.3 million
- 2010/11 programme for demolishing redundant buildings.

For all the above projects, RSK was instrumental in appraising all the contractors for National Grid Property’s select list. As the projects were invariably old structures associated with gasworks, there were substantial risks associated with asbestos and other gasworks contaminants, principally cyanides.

The contractor process involved establishing a site compound and a secured area before work could begin. Undertaking a process of decontamination using specialist cleaning techniques was necessary, following which ‘conventional’ demolition was implemented. Our CDM coordinator and compliance team worked proactively with National Grid to develop a positive health and safety culture within the demolition project team.

*Under the CDM 2007 regulations
St Peter’s Road is a historically contaminated former industrial site in Rugby redeveloped with 140 mixed-tenure housing units. Contamination of the site included chlorinated solvents (soil, dense non-aqueous phase liquids and dissolved phase), lubricating oils (soil, light non-aqueous phase liquids), polycyclic aromatic hydrocarbons and arsenic (soil).

In 2005, Miller Homes Ltd acquired the site for redevelopment for housing and appointed RSK to carry out comprehensive site investigation and assessment, pilot testing and remediation.

The key remediation requirements were that the site would be suitable for housing end use, the early completion of the northern part of the site, and minimal disruption to neighbouring residential areas. RSK designed a remediation scheme that used both in situ and ex situ methods on different parts of the site to meet these objectives.

Treatment-based remediation helped to avoid 20,000 t of waste and up to 1000 lorry movements.

House building started within six months of factory closure. The first properties were occupied in 12 months. Remediation was kept off the development critical path, and RSK handed over phases 2 and 3 months ahead of schedule. The final cost was £150,000 below pre-contract estimate, and no complaints were received from residents or the public.

Structural Soils won its third phase of ground investigation work at Wylfa, Anglesey, for Horizon Nuclear Power Ltd early in 2014. Site works commenced in March and are ongoing: the target completion date is November 2014. This work follows an initial investigation in 2008 and a seismic hazard assessment in 2011.

This is Structural Soils’ highest value contract to date and comprises the geotechnical and hydrogeological investigations for the construction of a twin-reactor nuclear power station. The range of fieldwork is extensive and includes more than 300 cable percussion and rotary boreholes at depths to 180 m. The total drilled length will exceed 15,000 m and has meant sometimes having up to 20 drilling rigs on-site.

In addition, RSK’s geosciences team has been undertaking surface and borehole geophysical surveys. All the boreholes have been optically logged as well as surveyed using downhole logging tools. A range of in situ testing has been undertaken in the completed boreholes.

All the samples from the site are being transported daily to a 1500-m² warehouse off-site where a team of 10 geologists and engineers is making detailed records of the soil and rock cores. This team has also been taking sub-samples for testing at RSK’s chemical laboratory, Envirolab. A vast quantity of samples for physical testing has also gone to Structural Soils UKAS-accredited soil and rock testing laboratories.

The final results and all the raw data (in accordance with the nuclear regulation authority requirements) will be compiled into a factual report expected to be a 30-GB file.
PROJECT CASE STUDIES

PROPOSED PENNYFEATHERS HOUSING AND COMMERCIAL DEVELOPMENT, UK

The proposed Pennyfeathers development consists of a mainly residential scheme (800–1400 units) comprising a mix of housing types, 3000 m² of commercial areas (for example, local shops), landscaped open space and leisure/recreation areas and supporting infrastructure, along with enhanced transport links. The latter include upgrading access to an existing railway station and providing local roads and improvements to existing road junctions, and extensions of cycleways and footpaths through the development to enhance linkages to the local and regional networks.

RSK was involved with the inception of the master plan before any ecological surveys were completed. This ensured the most obvious ecological constraints were highlighted at an early stage.

RSK proceeded with ecological surveys following agreement on the scope with the local planning authority and planning consultees. Ecological surveys were carried out for bats, dormouse, water vole, badger, great crested newt, red squirrel, and breeding and wintering birds. The botanical surveys included hedgerows, river corridor surveys and phase 1 and 2 habitat classification surveys.

The master plan was updated during and following the results of the surveys. RSK assisted with the public consultation of the scheme held in Ryde on the Isle of Wight in September 2011. The event was attended by more than 500 people, and many local residents were reassured that the development would not have a detrimental impact on biodiversity on the site or the wider landscape.

ACHEIVING PLANNING PERMISSION – FORMER LANDFILL SITE, READING, UK

A 20-ha former landfill site comprises a series of landfill cells in a former sand and gravel quarry. The waste is industrial and commercial waste in engineered cells. The site has planning permission for residential development for 465 houses/apartments. To facilitate development, remedial works were proposed that involved waste excavation, sorting, screening and soil washing to produce reusable fractions for use as engineered backfill for the development.

RSK provided support to achieve planning permission for the site. This included preparing an environment statement, developing a remedial method statement, groundwater and leachate sampling, gas monitoring and stakeholder liaison.

Extensive engagement with the local community was required to communicate progress on the project. An environmental management plan was developed to identify methods for air quality, noise, odour and dust monitoring during the project.

BRIDGE BEAM REPAIR ON THE DEANSBROOK VIADUCT, UK

RSK carried out a materials condition investigation of the fire-damaged prestressed bridge beams to the southernmost span of Deansbrook viaduct on the M1 motorway. The investigation comprised inspecting, sampling and testing the concrete, embedded steel prestressing tendons and reinforcement to determine the extent of the damage.

The site and laboratory work involved RSK’s geosciences and materials and structures business units, and included
- a geotechnical investigation of the ground beneath the props
- full visual, tapping and Schmidt hammer surveys of the extent of the damage
- low- and high-power microscopy examinations of cores through the various concrete elements to determine their condition and the depth and effects of heating
- site and laboratory testing of the load capacity and characteristics of the steel reinforcement.

The data RSK provided to the Highways Agency enabled it to decide that the bridge was repairable.
COALVILLE SURVEYS AND MASTER PLANNING, UK

RSK provided services for the proposed Coalville development north of Grange Road, Hugglescote. This mainly residential scheme included the development of up to 800 dwellings with associated highway works, a local centre, primary school, public open space, play areas and landscaping.

Initial field surveys carried out in spring 2010 comprised an extended phase 1 habitat survey and a walkover for protected animal species. We also completed a comprehensive desktop survey. This was followed by more detailed surveys for badger, bats, breeding birds, invertebrates, great crested newt and reptiles, and a detailed botanical survey of the grassland, woodland, hedgerows, streams and wetland. The survey data informed the environmental statement and helped to identify the ecological receptors affected by the proposed development.

The site contained and was immediately adjacent to several county wildlife sites (i.e., non-statutory sites). RSK worked closely with the Pegasus Planning Group and the client to ensure these areas were maintained and managed as part of the public open space and wildlife areas. This included a proposal for ongoing grassland management of an adjacent county wildlife site as part of the mitigation scheme.

ELEPHANT PARK, SOUTHWARK, UK

RSK has provided integrated sustainability services to Lendlease since 2012 in support of regenerating the former Heygate Estate, Elephant & Castle, London. The development, known as Elephant Park, will create 3000 new homes, 160,000 ft² of retail space and central London’s largest new park in over 75 years. RSK has supported various master-plan phases to date, including One The Elephant, Trafalgar Place, Elephant Park and the Energy Centre, with the following services:

- sustainability and energy strategy
- sustainability statements
- Code for Sustainable Homes Level 4 certification
- BREEAM Excellent certification
- SAP energy modelling and EPCs
- ecology
- carbon footprinting.

The development includes high levels of sustainability and energy performance with key features such as low-carbon heating via combined heat and power and district heating; solar photovoltaic arrays; and high-quality internal and external realms. Elephant Park is one of only 18 global projects that are signatories to the flagship C40 Cities Climate Leadership programme, which is taking action to reduce greenhouse gas emissions across the world’s megacities.

Image courtesy of dRMM Architects
SUPPORTING THE CONSTRUCTION INDUSTRY

PROJECT CASE STUDIES

SPECIALIST CONSULTANCY AND TESTING SERVICES – ST DAVID’S CENTRE, CARDIFF, UK

Following numerous successful consultancy and testing schemes with Bovis and Lend Lease, RSK was chosen to provide specialist consultancy and testing services for the landmark St David’s centre development in the Welsh capital.

The size of the development precluded the consideration of the build as a single enclosure. Part L2 compliance of ‘non-dwelling’ spaces required close monitoring of the construction details along with vigorous inspection and sample testing of areas of the building envelope.

Advice was provided throughout the project for designers and specialist envelope contractors to ensure that the details were robust and provided effective air seals along with well-considered, coordinated interfaces.

A tight programme, sectional completion and regular site supervision combined with workshops for all those involved meant that the compliance/verification package worked seamlessly with minimal disruption to the construction process. This was an important project for RSK and continued a great working relationship with Lend Lease that stretches back over 12 years.

After the retail spaces, the residential units were tested for airtightness in accordance with Part L1a. Again careful planning of testing meant that disruption to the construction process and cost of testing were well managed. The work package concluded well within the client’s budget.

VERIFICATION OF DEVELOPMENT AT PETERBOROUGH HOSPITAL, UK

The Peterborough hospital development saw the construction of three buildings at two sites to create leading healthcare facilities for Peterborough and North Cambridgeshire. RSK was recommended for the scheme and quickly identified the project needs to create a works package for Part L2 verification of all sections of the development.

The mental health and acute unit buildings were identified as ‘large and complex’ in the context of Part L2, so in close consultation with the area’s local authority building control team, a regime of detail review, inspection and sample testing was established such that this could be coordinated with the design and construction process.

RSK, with Brookfield design management, helped to coordinate the construction details and responsibilities with the trade contractors. Site inspections were coupled with workshops and briefing sessions to ensure that the relevant parties understood the importance of key details in the context of airtightness and workmanship, and the areas requiring closest scrutiny for workmanship.

As the phases of the acute and mental health unit were completed, sample area air leakage tests were undertaken to enable certification of the development without delay or disruption to the construction process.

The work package was concluded within the project budget and to the great satisfaction of the project team. As a result, RSK was awarded similar works packages at the Strata Tower, Elephant and Castle, London, and the South Glasgow Hospital development, also with Brookfield.
PROJECT CASE STUDIES

ASBESTOS AND ENVIRONMENTAL MANAGEMENT – GRAIN LNG TERMINAL, ESSEX, UK

A project site that had housed a former petroleum refinery underwent major redevelopment for the construction of a liquefied natural gas (LNG) storage facility. This included the construction of a pipeline and several large gas storage tanks.

Asbestos
RSK was commissioned to manage the removal of asbestos from a large section of the site before redevelopment. We assisted in the tender process by preparing the technical specification of works and assessing and interviewing licensed asbestos-removal contractors. We also worked with ecologists to ensure that protected species were managed appropriately and advised on methods of working. Problems were eliminated, and final inspections of the areas after removal of the asbestos were conducted to ensure all the work had been completed satisfactorily.

Ecology/EIA
RSK prepared an environmental statement that included coordinating all the supporting studies, consulting with the necessary organisations and managing all the necessary ecological and archaeological studies (off- and onshore). Furthermore, we prepared the pollution prevention and control application (the consent needed to operate top-tier industrial sites in the UK) and managed other consents needed for construction.

FORMER ICI CHLOR-CHEMICALS, NORTHWICH, UK

Winnington Urban Village Consortium, which comprises Taylor Wimpey, Morris Homes and Barratt, is redeveloping the approximately 56-ha site occupied by the former ICI Winnington works into an urban village. The village will include 1200 homes, a school, shops and leisure facilities.

Winnington Urban Village Consortium appointed RSK to undertake a detailed appraisal of the site ground conditions and to develop a strategy to remediate the site for its intended end use. RSK was commissioned to undertake an options appraisal for site drainage and to update the flood risk assessments.

RSK services included geoenvironmental appraisals, remediation design, drainage feasibility studies, flood risk assessments and regulatory negotiation.
The project objective was to remediate the fenced tar lagoons site to enable it to be reused for public amenity as part of the Grassmoor Country Park, while protecting the water environment of the site and preventing contaminants from causing impacts off-site.

RSK carried out a full EIA of the proposed scheme. This included assessments of contamination, air quality (including odour), ecology, archaeology, landscape and visual impact, hydrology and flood risk, amenity, access and recreation, noise and vibration.

RSK was also responsible for all aspects of community engagement, including a newsletter, a website and a public exhibition.

RSK’s team of landscape architects prepared the design and detailed landscape plans for the restored site, including woodland and grassland planting, footpaths and ecological mitigation.

Owing to recent case law, impacts on air quality, especially during transportation, were prominent issues. RSK was, however, able to develop and impose an in situ treatment methodology that was adopted for the project. RSK also helped to provide a design for the eventual after-use of the contaminated product that had low maintenance requirements and was within the allotted budget.

The Grassmoor Lagoons site is surrounded by Grassmoor Country Park, and Derbyshire County Council has elected to voluntarily remediate the potential sources of pollution at the site. RemedX was appointed by the council to carry out this remediation.

RSK was commissioned to undertake a full Level 6 underground utility survey as part of plans for a £325 million waterfront residential development. The survey included the use of medium-frequency ground-penetrating radar, the latest radiodetection equipment and an inspection cover lift-and-trace survey. The information aided the planning and design of the site, and complemented the work already undertaken on the site by other RSK teams.

The figure to the right shows an example survey drawing taken from the site indicating buried utilities and obstructions.
PROJECT CASE STUDIES

ELECTROMAGNETIC SURVEYS OF BROWNFIELD SITE – VEGA, BELLWAY HOMES, COLCHESTER, UK

RSK carried out time and frequency domain electromagnetic surveys on a brownfield site: a former diesel-engine works. This was to determine the location of foundation remnants, services, tanks, contamination hot spots and other buried obstructions. The information was used to target the subsequent intrusive survey.

The EM31 data (right) shows in situ reinforced concrete slabs (A), pile caps (B) and linear buried utilities (C).

NON-INTRUSIVE MICROGRAVITY SURVEY – BEACONSFIELD, UK

The site, a residential cul-de-sac in South Buckinghamshire, is an area subject to historical brick workings and potential voiding in the chalk bedrock at depth. RSK carried out a non-intrusive microgravity survey along the street and gardens that aimed to determine areas of low-density ground or voided ground in association with potential solution features.

The results of the gravity survey showed a several ‘gravity low’ features (see data plot right), which are likely associated with low density or voided ground. The survey also involved a full buried services survey from RSK’s SafeGround team to establish all the drainage routes.

SPECIALIST ROPE ACCESS – FINSBURY CIRCUS, CENTRAL LONDON, UK

In 2011, RSK’s materials and structures team was involved with a prestigious refurbishment and development of the prominent 12–15 Finsbury Circus building in Central London.

Appointed by the consulting engineer, RSK provided a detailed structural investigation of the substantial building frame and rope-access inspection of the impressive natural stonework façade.

Working closely with the pre-demolition contractor, RSK devised a programme that would provide a window of opportunity for its engineer-led teams to undertake a range of inspection and in situ materials testing. This included non-destructive radar by in-house IRATA qualified geophysical and civil engineers to ensure that data capture was interpreted efficiently with full knowledge and understanding of the engineering principles and properties of the construction materials involved.

The benefit from the radar survey was invaluable, as RSK was able to target locations for conducting follow-up controlled exploratory investigation, including a borescope survey within wall cavities to identify stonework support systems and condition factors. Additionally, RSK’s materials scientists recovered stonework specimens from site to enable examination and analyses in their UKAS-accredited testing laboratories. The techniques included petrographic examination of stonework to classify constituents and condition. The interpretative reporting included advice on future durability and maintenance aspects for the façade.
OUR UK AND IRELAND OFFICE LOCATIONS

OVER 2300 STAFF ACROSS 23 COUNTRIES
(Europe, Africa and the Middle East)

RSK is headquartered and has comprehensive coverage in the UK. Driven by key UK customers with operations overseas, we have built up a network of international offices across continental Europe, the Middle East and Africa.

Visit [www.rsk.co.uk/item/91-our-offices.html](http://www.rsk.co.uk/item/91-our-offices.html) for a full list of RSK office locations and contact details.

Abbots Langley
Tel: +44 (0)1923 260555

Aberdeen
Tel: +44 (0)1224 624624

Aberystwyth
Tel: +44 (0)1974 847000

Abingdon
Tel: +44 (0)1235 355630

Addlestone
Tel: +44 (0)1932 829007

Belfast
Tel: +44 (0)28 90 660993

Berwick-upon-Tweed
Tel: +44 (0)1289 304646

Birmingham
Tel: +44 (0)121 270 6962

Boxworth
Tel: +44 (0)1954 268200

Bristol (Old School)
Tel: +44 (0)117 947 1000
(Structural Soils Ltd)
Tel: +44 (0)117 947 1006
(RSK Group plc)
Tel: +44 (0)117 947 1007
(RemedX Ltd)

Bristol (Richmond House)
Tel: +44 (0)117 244 4000

Bristol (Rock House)
Tel: +44 (0)117 982 1473

Cardiff
Tel: +44 (0)2920 899674

Castleford
Tel: +44 (0)1977 552255

Coventry (Abbey Park)
Tel: +44 (0)24 7650 5600

Coventry (Seven Stars)
Tel: +44 (0)24 7630 3422

Crewe
Tel: +44 (0)1270 589615

Deddington
Tel: +44 (0)1869 336827

Derby (Pride Park)
Tel: +44 (0)1332 542740

Derby (Victory Park)
Tel: +44 (0)1332 771104

Dublin
Tel: +353 (0)1 244 4511

Duggleby
Tel: +44 (0)1944 738646

Edinburgh
Tel: +44 (0)131 225 3007

Glasgow
Tel: +44 (0)141 418 0471

Harpenden
Tel: +44 (0)1582 460018

Helsby (head office)
Tel: +44 (0)1928 726006

Hemel Hempstead
Tel: +44 (0)1442 437500

Hereford
Tel: +44 (0)1432 820444

Holyhead
Tel: +44 (0)1407 458006

Hyde
Tel: +44 (0)161 368 4921

Isle of Man
Tel: +44 (0)1624 604471

Leeds
Tel: +44 (0)113 232 1630

Llanafan
Tel: +44 (0)1774 197116

Llanelli
Tel: +44 (0)1554 566566

London
Tel: +44 (0)203 051 8531

Manchester (Fourways)
Tel: +44 (0)161 236 2757

Manchester (Peter House)
Tel: +44 (0)161 209 3644

Meden Vale
Tel: +44 (0)1623 844331

Minety
Tel: +44 (0)1666 860522

Motherwell
Tel: +44 (0)1698 230231

Nottingham
Tel: +44 (0)1949 851820

Pool
Tel: +44 (0)1872 261775

Runcorn
Tel: +44 (0)1928 513100

Southampton
Tel: +44 (0)1794 329276

Starcross
Tel: +44 (0)1626 890224

Stirling
Tel: +44 (0)1786 357030

Tattenhall
Tel: +44 (0)1829 770569

Terrington St Clement
Tel: +44 (0)1553 828127

Tonbridge
Tel: +44 (0)1732 833111

Uckfield
Tel: +44 (0)333 999 7687

Wakefield
Tel: +44 (0)1924 229889

Warrington
Tel: +44 (0)1925 855440

Washington
Tel: +44 (0)191 482 8500

Wigan
Tel: +44 (0)1942 493255

Wolverhampton
Tel: +44 (0)1902 271300
Contact us

If you would like to know more about RSK, please contact Haydn Keen:

Direct dial: +44 (0)1928 728108
Mobile: +44 (0)7713 214587
Email: hkeen@rsk.co.uk