



# igne

Igne ensures the success of your construction or infrastructure project with geo-environmental site investigations, unexploded ordnance risk mitigation, construction materials testing, and geothermal and water supply solutions.

We are one company, one team,  
working together to support you.

informed | in-depth | integrated



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# We are Igne

In 2023, the best businesses in their respective fields combined to form Igne - ensuring service delivery for clients can be integrated - through one supplier - not many.



At Igne, quality, health, safety, and environmental standards are at the heart of our company.

We hold required and advanced accreditations and certifications, ensuring our clients can trust in the quality and reliability of our processes, expertise, services and solutions.

Our rigorous internal quality control is reinforced by these industry-leading accreditations and recognised supplier approvals, giving you peace of mind:



informed | in-depth | integrated





# QHSE

At Igne, our stated purpose is to improve the built environment, enable sustainable communities and advance positive change – therefore our commitment to quality, health, safety and the environment (QHSE) is a key priority at the heart of our company.

The environment we operate in is ever changing and we remain dynamic in our safety approach. Our QHSE culture is continually evolving so our colleagues are empowered to take ownership of their own safety and trained to deliver the best quality, health, safety and environment performance. We set high standards and do not compromise on safety

We understand true sustainability means meeting the needs of the present without compromising the ability of future generations to meet their own needs. This guiding principle, originally defined by the Brundtland Commission, informs all aspects of our operations and services.



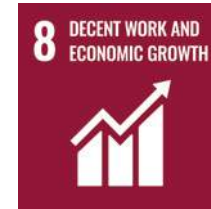
We are dedicated to being environmentally friendly, socially responsible, and economically viable to ensure long-term success and wellbeing for both current and future stakeholders.

We use the United Nations Sustainable Development Goals (SDGs) as the guiding framework for our environmental, social governance initiatives, selecting those most relevant to our operations.



# Social Value

Igne's social value strategy is aligned with the British Government's Social Value Model and the United Nations' Sustainable Development Goals. It forms an integral part of our environmental, social and governance strategy to support people and planet.



We have selected 5 key values to initially focus upon to deliver impactful and discernible change:

- Jobs
- Skills & Training
- Environment
- Staff Wellbeing
- Community

By focusing on jobs and skills & training, we aim to foster sustainable employment and develop our talent, ensuring that our people and the communities within which we work benefit from the growth we drive.

Prioritising the environment aligns with our purpose: To improve the built environment, enable sustainable communities and advance positive change. We will focus on reducing carbon emissions and promote sustainable practices across the supply chain.

Our focus on staff wellbeing ensures a healthy, supportive workplace culture, while our engagement with the community strengthens social cohesion and enables meaningful local contributions.

**Through these actions, we aim to deliver lasting change.**



# Geo-environmental Solutions:

## Land Contamination Risk Management Services

Igné's land contamination risk management and assessment services are designed to de-risk client projects by delivering comprehensive insights into ground conditions. This ensures that project deadlines and budgets are protected while adhering to regulatory frameworks.

We provide tailored support across sectors, including residential, retail, commercial, and industrial, for projects ranging from single-phase developments to large-scale, multi-phase undertakings.

Our services align with the UK Government's Land Contamination Risk Management (LCRM) guidance, following a structured approach to

the assessment and management of risks posed by land contamination.

We operate within property, infrastructure, and construction sectors, ensuring that risks associated with the acquisition, development, closure, or divestiture of assets are minimised.



## Staged Land Contamination Risk Management Process

The LCRM process is a stepwise approach, from initial desk-based studies to detailed intrusive investigations, and where necessary, to remediation and verification. The need to complete all stages depends on the level of contamination detected and site-specific conditions. Our experts will guide your decision-making and planning.

### Stage 1: Risk Assessments

We undertake comprehensive risk assessments that include:

- **Preliminary Risk Assessments (PRA):** An initial desk study and site walkover to identify potential contamination risks based on historical, geological, and environmental data.
- **Generic Quantitative Risk Assessments (GQRA):** These use generic criteria to assess whether contaminants pose unacceptable risks to receptors like human health, water resources, and ecosystems.
- **Detailed Quantitative Risk Assessments (DQRA):** A more refined risk evaluation using site-specific data to undertake forward modelling and produce site specific assessment criteria.

### Stage 2: Remediation Options Appraisal

When contaminants are identified, we guide clients through a structured options appraisal process to ensure compliance with regulatory requirements:

- **Identifying Feasible Remediation Options:** Evaluate potential methods based on site-specific factors such as contaminant type and location.
- **Detailed Evaluation of the Options:** Assess technical feasibility, effectiveness, cost, and environmental impact.
- **Selecting the Final Feasible Remedial Option:** Choose the optimal approach that balances regulatory compliance with client objectives.
- **Consultancy:** Provide ongoing advice throughout the remediation process to ensure alignment with environmental goals and project milestones.



### Stage 3: Remediation and Verification

We oversee the implementation of the chosen remediation strategy, ensuring that all work complies with the approved plan:

- **Remediation Strategy Development:** Creation of site-specific remediation plans based on identified risks and regulatory guidelines.
- **Remediation Implementation:** Supervision of remedial work, ensuring safe and effective removal or treatment of contaminants.

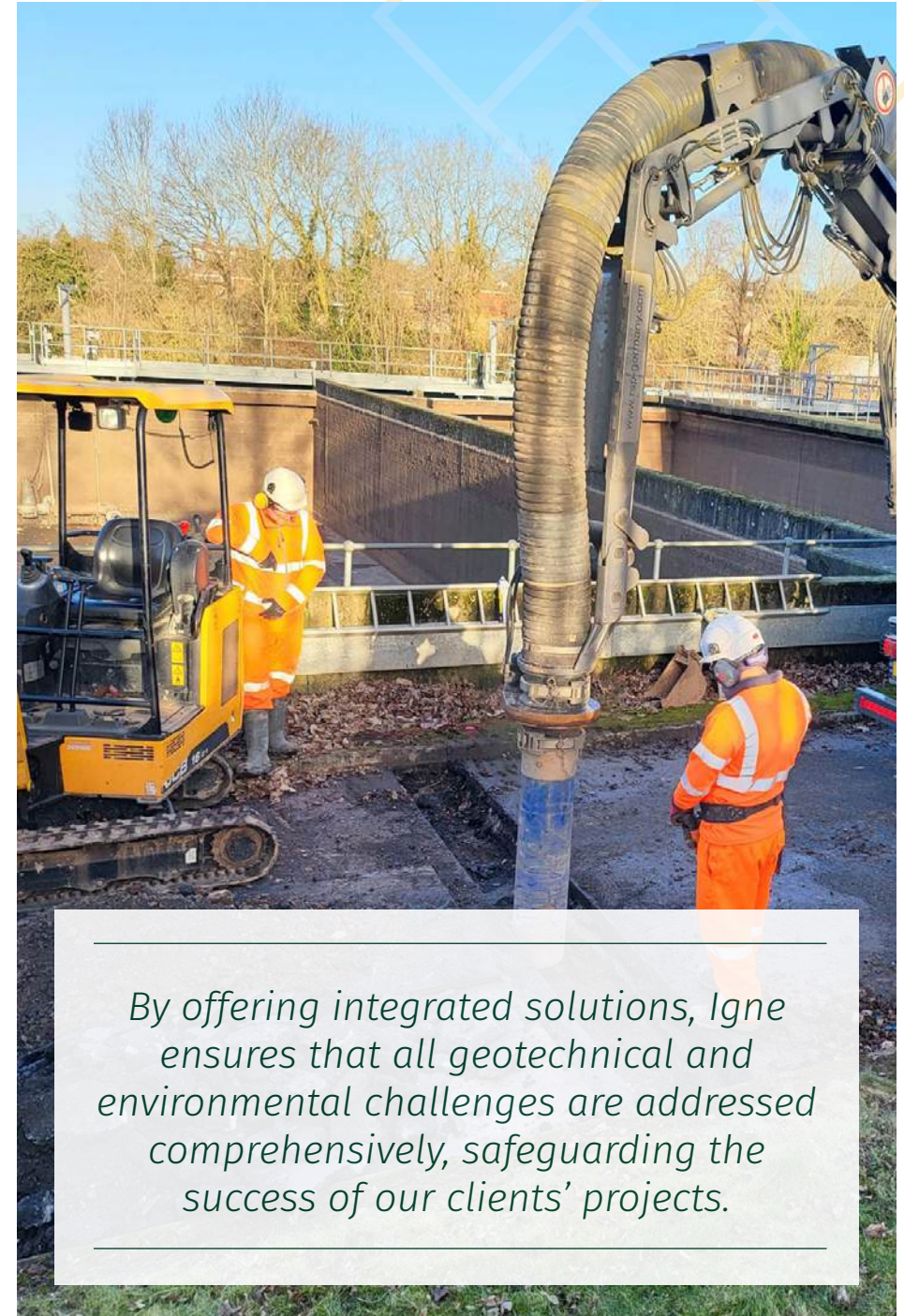
- **Verification Reporting:** Preparation of detailed verification reports that demonstrate compliance with agreed remediation objectives and regulatory standards.
- **Long-term Monitoring:** Where necessary, we conduct post-remediation monitoring to ensure the continued protection of human health and the environment.

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### Integrated Environmental Services

To complement our land contamination risk management services, Igne offers a wide range of related environmental and geotechnical services, including:

- Coal Mining Risk Assessments (CMRAs)
- Topographic & Utility Surveys
- Geotechnical Assessments (for foundation and pavement design)
- Hydrogeological Assessment and Modelling
- Flood Risk Assessments
- Ecology and Archaeology Services
- Landfill Services
- Slope Stability Assessments
- Coal Mining Investigations & Remediation
- Environmental Auditing & Appraisal:
  - Environmental Audits
  - Material Management Plans (MMPs)
  - Site Waste Management Plans (SWMPs)
- Earthworks Modelling:
  - Site Analysis & Visualisation
  - Volume Calculations
  - Earthworks Planning & Scheduling



*By offering integrated solutions, Igne ensures that all geotechnical and environmental challenges are addressed comprehensively, safeguarding the success of our clients' projects.*



# Unexploded Ordnance Risk Mitigation

As the UK's leading expert in the management and mitigation of the risk associated with unexploded ordnance (UXO), we work closely with key partners, particularly those in the construction, energy, engineering and infrastructure industries, to ensure works are carried out safely.

Every site is unique, and our expertise lies in tailoring the most effective technical solutions to each one, minimising disruptions to your schedule and protecting your budget.

The prospect of finding an item of UXO is of course concerning, but we alleviate your stress by implementing the right measures, making sure your project is in our safe hands and remains on track.

Our core services follow the four stages of Construction Industry Research and Information Association (CIRIA) C681 guidelines. Depending on the site's risk classification, it may not be necessary to complete all stages:

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*Our expertise lies in tailoring the most effective technical solutions to each site*

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## Stage 1

**Preliminary UXO Risk Assessments (also referred to as PRA, UXO PRA, Stage 1 UXO report, UXO hazard assessment)**

This is an initial qualitative screening exercise to evaluate the potential presence of UXO at a given site. The process involves considering fundamental factors that influence the likelihood of UXO being present and the probability of any associated hazards occurring.

The primary objective is to determine whether there is a need for more in-depth research, in the form of a Detailed Risk Assessment, to further clarify the UXO risk. By identifying or discounting the necessity for a Detailed Assessment, the Preliminary Assessment helps streamline the risk management process, ensuring that resources are allocated efficiently.



## Stage 2

### Detailed UXO Risk Assessment (DRA)

This is a tailored and thorough report evaluating the potential risk posed by UXO to a proposed project. This detailed report investigates the potential extent of contamination, identifying both the source and nature of likely explosive contaminants. It also assesses the likelihood and potential consequences of encountering UXO in relation to the intended use of the site and proposed construction activities.

If the assessment identifies an elevated risk, it will recommend appropriate risk mitigation measures in accordance with CIRIA C681 guidelines. These measures are designed to minimise the risk of encountering UXO and the associated potential for harm and damage during the planned works, ensuring that the risks are managed to 'as low as reasonably practicable' (ALARP).

## Stage 3

### Risk Mitigation Measures

If the level of risk of encountering UXO identified on a site is elevated and therefore not safely acceptable, Igne's explosive ordnance experts will identify the specific UXO mitigation works required to address the risk.

Our explosive ordnance experts will produce your comprehensive risk mitigation plan.

Your plan will answer the question: "is this mitigation solution viable?"

If the answer is no, we will work with you to find viable options for your development.

## Stage 4

### Implementation

Once your mitigation proposal is viable, our explosive ordnance disposal (EOD) expert resources will deploy as required and complete this phase for you. If no UXO is encountered during this final phase you will receive a report, and no further action will be required to fulfil your CDM2015 obligations. If UXO is encountered, the finding will be reviewed, the plan completed and if necessary, stage 4 will be repeated.

### Solutions available include:

- Site Specific UXO Awareness Briefings
- Non-intrusive Surveys: Pedestrian, Towed, UAV
- Intrusive Surveys: Hydraulic (CPT) and Drilling
- Target Investigation
- Search and Clear Operations
- EOD Watching Brief
- Support to Site Investigation Works
- UXO Disposal
- Training and Consultancy

## Site Investigation and Surveys

Ground related construction issues cost clients millions each year. The solution is Igne's site investigation and survey services which optimise and de-risk complex ground systems in a thorough and cost-effective way.

Our specialist and diverse in-house resources allow our professional practitioners to deliver accurate, robust, and timely data about the geotechnical and geoenvironmental properties of your site.

As our clients, you are enabled to deliver best value projects by optimising your designs for new and existing developments appropriate to the subsurface conditions. Our service offering covers private and public sectors spanning construction and civil engineering, contaminated land, energy, mining and quarrying, transportation, water resources management and urban planning and development.

### Risk Assessments

- Phase 1 Desk Study
- Flood Risk Assessments
- Coal Mining Risk Assessments
- UXO Risk Assessments
- Ground Gas Risk Assessments
- Quantitative Risk Assessments
- PPC & Site Surrender Reports
- Groundwater & Hydrological Modelling

### Drilling & Probing

- Sonic Drilling
- Rotary Drilling
- Cable Percussion Drilling
- Dynamic Cone Penetration (DCP) Testing
- Dynamic Sampling
- Pavement & Concrete Coring
- All Terrain Low Ground Pressure Vehicles
- Mechanical Excavated Trial Pits
- Hand Excavated Trial Pits
- Restricted or Difficult Access Solutions (Including Mine Shaft and Cantilever Platform Systems)



## On-site Testing & Instrumentation

- Cone Penetration Testing
- Standard Penetration Testing
- Permeability Testing
- Down-hole Shear Vane Testing
- Soakaway and Infiltration Testing
- Down-hole Geophysics
- Groundwater Quality Parameter Assessment
- Groundwater and Gas Measurement Installations
- VOC/SVOC Detection
- Soil Thermal Resistivity Testing
- Electrical Resistivity Testing
- Plate Load Testing
- California Bearing Ratio Testing
- Down-hole Magnetometer Testing
- Automated Monitoring Systems (e.g., Divers and Vibrating Wire Piezometers)
- Groundwater & Gas Monitoring Assessment
- Inclinator & Extensometer Installations



## Geotechnical & Geo-environmental Testing and Reporting

- Environmental Site Assessments
- Chemical Testing
- Geotechnical Testing
- Factual & Interpretive Reporting
- Remediation Options Appraisal and Method Statements
- Post Remediation Validation Reporting
- Aggregate & Rock Testing
- Ground Aggressiveness Testing
- Waste Acceptance Criteria Testing
- Asbestos Identification & Quantification
- Mine Working Investigation and Treatment
- Soil and Groundwater Remediation

## Surveys

### Topographical Surveys:

- Control Network Installation
- Construction & Civil Engineering
- Volumetric & Stockpile Surveys
- Pre & Post Construction Surveys
- Setting Out
- Cut & fill Assessment Surveys

## Utility Surveys:

- PAS 128 Standard Utility Surveys
- Ground Investigation Utility Avoidance
- Drainage Connectivity & CCTV Surveys

## GPR Surveys:

- Foundation & Buried Obstructions
- Pile Caps
- Building Foundations
- Badger Setts
- Tree Roots

## Measured Building Surveys:

- 3D laser Scanning
- Floor plans
- Elevations
- Building Cross Sections

## Monitoring Surveys:

- Precise Levelling
- 3D Settlement Monitoring
- Remote Monitoring
- Track Monitoring



## UAV (Drone) Surveys:

- Lidar & Photogrammetry Surveys
- Site Progress Monitoring
- Topographical Survey
- Volume Analysis
- Building Inspection
- Pre & Post Condition Surveys
- Multispectral Surveys
- Agriculture & Crop Health
- Invasive Species & Weeds Identification
- Archaeological Mapping
- Magnetometer Surveys
- Utilities Mapping
- Archaeological Mapping
- Roof Inspection
- Roof Condition
- Thermal Mapping
- Geological Mapping
- UXO Magnetometry

## Bathymetric Surveys:

- USV Inland Water Surveys
- River Cross/Long Sections

## CAD & Data Processing Services:

- BIM & Revit modelling
- Video & Visualisation
- Volumetric & Stockpile Calculation & Reporting
- Cut & Fill Calculation & Reporting
- Multispectral UAV Data Processing



# Construction Materials Testing

Igne's laboratories safeguard your investment with industry-leading testing services for all construction materials. Our UKAS accredited procedures and laboratories, which are located nationwide, offer a fast and responsive service to meet your needs and deliver comprehensive testing to meet British and European standards, minimising costly project delays.

We also provide on-site field-testing services enabling real-time decisions to be made. Our expertise extends to concrete sampling and testing as well as geotechnical testing, including all soils, aggregates and rocks, and our laboratories offer insights into project foundations, empowering

informed decisions relating to bearing capacity and compaction criteria.

With a responsive approach, and by delivering detailed reports, we ensure your materials meet the highest standards to reduce your risks.

## Laboratory Testing:

### Soil Testing:

#### • Classification Testing:

- Water Content
- Particle Size Distribution
- Plasticity Index
- Particle Density
- Sedimentation
- Bulk Density
- Linear Shrinkage

#### • Compaction Testing:

- Dry Density Water Content Relationship
- Moisture Condition Value
- California Bearing Ratio

#### • Specialist Testing:

- Triaxial Testing
- Permeability
- Effective Stress
- Large Shear Box
- Small Shear Box
- Thermal Resistivity
- Oedometer Consolidation

#### • Rock Testing:

- Water Content
- Point Load Index
- Porosity and Density
- Unconfined Compressive Strength
- Slake Durability

#### • Aggregate Testing:

- Water Content
- Particle Size Distribution
- Los Angeles Coefficient
- Aggregate Abrasion Value
- Aggregate Crushing Value
- Ten Percent Fines Value
- Flakiness Index
- Aggregate Impact Value
- Magnesium Sulphate Soundness
- Water Absorption
- Frost Heave

#### • Concrete Testing:

- Sampling
- Slump Test
- Cube Manufacture

- Compressive Strength Test
- Flow Table
- Air Test
- Testing of Bituminous Mixtures:
  - Binder Content
  - Bulk Density
  - Air Voids Content

## On-site Testing:

- Plate Load Testing
- CBR Testing - Plate & Plunger
- Sand Replacement
- Nuclear Density Gauge
- Core Cutter Density
- Light Weight Deflectometer
- Road Investigation
- Core Extraction
- Dynamic Cone Penetrometer (DCP)



# Water Wells

At Igne, we specialise in providing cost-effective, high-quality, and independent water supplies to both private and public sector clients. With a proud heritage and over 350 years of combined experience in borehole drilling, we have established ourselves as one of the UK's leading water supply specialists.

We serve domestic and commercial clients, and support a diverse range of industries, including food and beverage, agriculture, healthcare, and hospitality. Our expert team is committed to delivering an efficient and stress-free experience, from initial site inspections and hydrogeological assessments to drilling, test pumping, and project completion.

Our full-service approach includes close collaboration with specialist hydrogeological consultants, ensuring that your water supply remains uninterrupted through comprehensive business continuity planning. Additionally, our in-house borehole geophysics services and thorough maintenance contracts underscore our commitment to preventive care, saving you time and costs in the long run.



Choose Igne for a seamless and reliable water supply solution tailored to your needs.

## Services include:

- Borehole Drilling and Lining
- Borehole Remediation
- Monitoring Boreholes
- Water Treatment System Design and Installation
- Water Analysis
- Hydrogeological Assessments
- Installation of Borehole Pumps
- Installation of Booster Pumps
- Test Pumping
- Licencing Applications
- Water Treatment
- Maintenance Contracts
- Reverse Circulation Drilling
- Installation of Small-scale Bottling Plants



# Geothermal

Igne supplies comprehensive geothermal solutions, providing low carbon heating and cooling systems for both residential and commercial properties. As a specialist contractor, and in partnership with designers and consultants, Igne enables every aspect of your geothermal project—from design and drilling to installation and pump testing—ensuring a seamless and efficient process.

For residential properties, Igne offers ground source heat pump systems that deliver sustainable heating and cooling, independent of mains gas or heating oil. Our solutions are designed to be low carbon, high quality, and fully compliant with industry standards. Igne can take a project from concept to design to delivery. Taking care of all aspects including design of and installation of heat pumps.

For commercial premises, Igne specialises in open loop geothermal borehole systems, catering to a diverse range of applications from universities to greenhouses. With Igne, you can expect a reliable, tested approach that meets the highest standards of compliance and performance.

By choosing Igne, you are opting for an environmentally conscious solution, backed by specialist drilling expertise and a commitment to delivering excellence in every project.

## Geothermal solutions include:

- Thermogeological Assessments
- Drilling of Open Loop Boreholes – Both Abstraction and Injection
- Drilling of Closed Loop Boreholes
- Design and Installation of Heat Pumps and Heat Pump Systems
- Drilling of Minewater Geothermal Boreholes

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*“By choosing Igne, you are opting for an environmentally conscious solution, backed by specialist drilling expertise”*

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# Specialist Drilling and Pumping Services

Igne can support your water, geotechnical, dewatering, renewables, mining and exploration projects with specialist services including:

## Test Pumping

Test pumping systems can be set up for abstraction boreholes for any depth and flow rate. Igne has a vast array of equipment to suit all projects. Water can be treated prior to disposal. We are experienced in test pumping for water abstraction boreholes and full testing of geothermal systems including multiple abstraction and injection boreholes.

## Deep Wireline Coring

Igne has the experience and equipment to produce when others can't. We can support any project requirements for deep wireline cored boreholes whether that is to ensure verticality or for exploration or for geotechnical purposes. Our drill crews are experienced in working with complex geophysical or in-situ testing regimes.



## Dewatering boreholes

Igne can assist with your dewatering programmes including drilling, installation and development of boreholes. Pump tests can permanent pumps and controls can be installed to suit your project.

## Reverse Circulation Drilling

Perfect for soft formations and or large diameter boreholes, Igne can provide a drilling solution using flooded reverse circulation techniques.

## Acidisation

We can provide a safe and compliant method to acidise your borehole to ensure maximum yield. Igne is one of only a handful of companies in the UK with the expertise to undertake these works. Acidisation can be undertaken as a standalone project or in conjunction with our drilling services.

## Control of Artesian Water

We can provide support on site or technical support and designs to assist with the control of artesian water during drilling.



# Borehole Geophysics

## Wireline Logging & Down the Hole Geophysics

Igne is a customer and data focused wireline geophysics provider for all sectors including water, geotechnical, environmental, geothermal, renewables, mining and mineral exploration.

We provide seamless on-site data collection, data processing and reporting and can easily deploy to any site anywhere in the UK.

We understand that with data collection of this nature, flexibility is required as your requirements can be last minute or can change during a project. Consequently, we are set up in an agile manner to help you deliver your project. Our equipment is primarily operated from a 4x4 vehicle but can be dismantled based on site requirements.

Everything we do adheres to the highest standards including full quality, health, safety and environmental support on site.

### Igne can support your project

#### with the following sondes:

- Calliper
- Borehole CCTV
- Verticality
- Temperature & Conductivity
- Natural Gamma
- Impellor Flowmeter
- Dual Focused Resistivity
- Discrete Fluid Sampler (1l and 2l)
- Sonic
- Acoustic Televiwer
- Optical Televiwer

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*“We provide seamless on-site data collection, data processing and reporting and can easily deploy to any site anywhere in the UK”*

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# That's enough about us!

Now tell us about you, the projects you're planning, and how we can enable your success.

We can't wait to hear from you:

igne.com | hello@igne.com | 0371 789 1000

We look forward to you joining our-ever growing list of satisfied clients:





# Igné's services stand alone or can be integrated to support the lifecycle of your project.

- Surveys and site investigation to help you build a complete picture of your development site.
- End-to-end UXO risk management services for safe project execution.
- UKAS accredited laboratories that deliver exceptional construction materials testing.
- Water supply and geothermal heating solutions for domestic, agricultural, and commercial clients.

Contact us to learn more:

Call: 0371 789 1000

Email: [hello@igne.com](mailto:hello@igne.com)



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