



## Instrumentation, Testing & Monitoring

Testconsult provides both in-situ and controlled condition testing solutions for a broad range of industries in both the UK and Ireland. Our Engineers are able to undertake complex instrumentation and load testing programs on bridges, structures, and components to assess serviceability and compliance with relevant standards. We also specialise in remote monitoring systems which clients can view directly and securely on our web based results database.

Testconsult can develop bespoke test methods and complex instrumentation solutions to suit clients needs, as control software is written in-house. Our use of many sensor types ensures that the overall aims of the sur-

vey are accomplished. Applications range from long term stress and displacement monitoring of bridges to dynamic measurement of strain and displacement over a few milliseconds. We also provide services to the manufacturing industry with instrumentation of plant and machinery and proof certification of products such as barriers and scaffolding, using our purpose built load test beds.

Our Environmental team can carry out full noise and vibration surveys on site and also advise on nuisance alleviation measures. We also hire out user friendly noise and vibration monitoring equipment if required on long term contracts.

## Services

- ◆ **ISO17025 Quality Control Systems Accredited by UKAS**
- ◆ **Fast Efficient Service**
- ◆ **Bespoke Testing Solutions**
- ◆ Instrumentation and monitoring of bridges & buildings
- ◆ Structural investigations and condition surveys
- ◆ Compliance proof load testing of barriers and components
- ◆ Geophysical investigations and Corrosion surveys
- ◆ Structural testing facilities for component assessment
- ◆ Environmental Studies of Noise, Vibration, Dust and Water
- ◆ Chemical and laboratory testing of samples - UKAS accreditation
- ◆ Fully Independent Service



## Testconsult Structural Testing Services

### Instrumentation

Monitoring of Bridges, buildings, tunnels, dams, environment & machinery  
Remote and web monitoring systems  
Web data presentation and storage with client login ([www.testresult.co.uk](http://www.testresult.co.uk))  
Real time monitoring (T-Cyclops)  
Measurement of : stress, strain, temperature, noise, vibration, displacement, tilt, natural frequency, position, pressure, load, half-cell potential, acceleration and fatigue



### Corrosion Surveys

Rate of Corrosion testing  
Lamp post condition assessment  
Transmission tower legs

### Geophysical Investigations

Ground Penetrating Radar of structures  
Conductivity  
Micro-gravity

### Laboratory Testing

Chloride ion and Sulphate content  
Cement content  
Compressive strength of cores  
Petrographic examinations  
HAC & ASR - presence and condition  
Thaumasite reaction identification  
Steel - identification of type & strength  
UKAS accredited soils testing

### Environmental Studies

Noise surveys—Leq, L90 and long term  
Environmental Noise Modelling  
Environmental Noise monitoring  
Wind farm environmental studies  
Vibration monitoring  
Hand-arm-whole body vibration  
Frequency analysis of rotating plant  
Vibration isolation advice  
Design of machine foundations, mounts  
Equipment hire—vibration & noise  
Dust sampling and monitoring

### Structural Investigations

Bridges—BA35/90 and Post Tensioned  
Buildings and Car Parks  
Location of ducts and voiding  
Pressure testing and imaging of voids  
In-situ stress determination  
Depth of cover and rebar mapping  
Half-cell potential mapping  
Resistivity and depth of carbonation  
Delamination and rebound surveys  
Pull-off and pull-out tests  
Humidity and moisture levels  
Ultrasonic surveys  
Finite Element modelling  
Borescope investigations  
Sampling by dust & diamond coring  
Steel, Paint and coating sampling  
Tensile testing and residual stress

### Compliance Load Testing

Scaffold & barrier compliance testing  
Temporary structures testing to BS EN 12811-3:2002  
Stadium barriers and hand rail testing  
Fixtures and fittings proof certification  
Anchorage performance  
Vehicular and pedestrian barrier testing  
In-situ proof testing of lift shaft beams  
Purpose built test beds in UK & Ireland



### Structural Load Testing

Static & dynamic load testing of floors  
Flexural strength of beams  
In-situ load testing of car park barriers  
Lighting column load testing

### Geotechnical Testing

Pile Integrity testing  
Sonic logging of foundations  
Dynamic & Static load testing of piles  
Testing of foundations under structures  
SPT Hammer Energy Analysis  
Transmission tower assessment  
Inclinometer & Piezometer installation  
Gas monitoring (radon and organic)

## Contact Details

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