

## GEO-ENVIRONMENTAL

- Phase 1 Land Quality Assessment Desk Study
- Ground Investigation
- Geotechnical Assessment
- Coal Mining Risk Assessment
- Grouting Specification
- Gas Risk Assessment
- Hydrogeological Assessment
- Soakaway tests
- Soil Contamination Assessment
- Groundwater & Surface Water Pollution Assessment
- Detailed Quantitative Risk Assessment (DQRA)
- Arboricultural Impact Assessment

### Environmental Assessments

- EdA
- Biodiversity action plans & protected species plans

### Acoustics & Air Quality

- Noise baseline measurements
- Industrial & construction noise modelling
- Mitigation assessments
- Ambient air quality

### Ecology Services

- Seasonal and phase 1 surveys
- NVCC
- Habitat & flora surveys
- Tree surveys
- Fauna surveys (mammal, reptile & bird)
- Activity surveys
- Invasive species surveys

## CIVIL

- Flood Risk Assessment
- Detailed surface water drainage design incl. SuDS (Detailed Planning Application)
- Preliminary surface & foul water drainage incl. SuDS (Outline Planning Application)
- Archaeological Desk Study
- Wind Tunnelling Assessment
- Full engineering appraisal of the site
- Engineering appraisals to inform viability
- AutoTrack – Swept Path Analysis
- Topographical Survey
- Utility Ground Scans

### Transport Services

- Transportation Assessments
- Transportation & Highways Statements
- Travel Plans
- Road Safety Studies & Audits
- Parking Surveys
- Construction Management Plans
- Waste Management Plans
- Delivery & Service Management Plans
- Healthy Streets & Active Travel Zone Assessments
- Expert witness for traffic & highway related issues
- Public consultation
- Noise Surveys
- Street Lighting Design
- Cycle Route Design ( LTN 1/20 compliant)

### Rail Sector

Non-trackside work for management, maintenance and new construction including:

- GRIP Stage 1 – Output definition
- GRIP Stage 2 – Feasibility
- GRIP Stage 3 – Option selection

## STRUCTURAL

### Survey of all structures including:

- Buildings, with/without MEWP/access equipment
- Culvert/confined spaces
- River/quay wall, bridges
- Historic structures – World Heritage sites, all Grades and Scheduled Ancient Monuments
- Photographic surveys
- Scheme design and sizing of structural zones
- Structural strategies
- Feasibility studies/optioneering
- Preliminary scheme design including foundation options
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- Scheme design and sizing of structural zones
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## GEO-ENVIRONMENTAL

- Pile mat design
- Slope Stability Assessment
- Seepage analysis for ponds
- Detailed foundation calculations (bearing & settlement to EC7)
- Foundation inspections (formation level)
- Gas Membrane Validation

### Earthworks

- Classification of soils in accordance with SHW Series 600
- Earthworks Specifications
- Ground Engineering Design
- Validation
- Supervision

### Contaminated Land

- Remediation options appraisal, design & supervision/ validation
- Waste classification

### Mining

- Drilling & grouting specification
- Supervision of validation

### Acoustics & Air Quality

- Construction monitoring
- Verification survey
- Dust monitoring

### Ecology Services

- Habitat & flora
- Fauna monitoring (mammal, reptile & bird)
- Relocation & translocation programmes
- Biodiversity action plans & protected species plans
- Ecological clerk of works

## CIVIL

- S278/S38 Adoptable Road Design
- S104 Adoptable Drainage Design
- Sustainable Urban Drainage System (SuDS) designs
- Proposed Development Levels Design
- Private Drainage Design
- Foundation Schedules
- Cut and fill/earthworks modelling
- AutoTrack – Swept Path Analysis
- S104 Adoptable Drainage Designs
- DMRB Highway Specifications
- Grade separated junction design
- Roundabout Design

### Transport Services

- Traffic Signal Junction Design
- Priority Junction Design
- Road Safety Audit
- Road Safety/Traffic Calming Design
- BIM Compliant Modelling
- Travel Plans
- Car Park Design
- Construction Management Plans
- Waste Management Plans
- Delivery & Service Management Plans
- Street Light Design
- Cycle Route Design ( LTN 1/20 compliant)

### Rail Sector

Non-trackside work for management, maintenance & new construction including:

- GRIP Stage 4 – Single option development
- GRIP Stage 5 – Detailed design
- GRIP Stage 6 – Construction, test & commission
- GRIP Stage 7 – Scheme Handback
- GRIP Stage 8 – Project close out

## STRUCTURAL

### Full Design and Drawing Services

- Full BIM service
- Residential/industrial/commercial/leisure
- New build and refurbishment

### Conceptual design and preliminary assessment of structures

- Residential/industrial/commercial/leisure

### Sub-Structure

- Pads/strips
- Raft foundations
- Pilecaps/ground beams
- Retaining walls
- Category 2 & 3 checks

### Superstructure

- Steel frame, with/without composite floors
- Reinforced concrete frame
- Masonry – stone/brick/block
- Timber design
- Cold rolled lightweight steel framing - - systems
- Podium slabs – steel & reinforced concrete

### Historic Structures

- World Heritage sites, all Grades and Scheduled Ancient Monuments
- Sympathetic repair details
- Timber & masonry repair details

### Party Wall Services

### Bridge Design and Assessment Peer Review

### Marine works

- Coastal, river and sea defences, quay walls, jetty works & offshore structures