

The Frankham Civil Engineering Departments core services and capability are Bridges, Civil Engineering and Building Structure assets in transport and infrastructure. Our clients operate in 4 main market sectors - Maritime, Rail, Highways and Land and the Legal Services Sector. A sample of our services are shown below as an indication of our ability to assist clients with Civil Engineering Consultancy requirements.

## MARITIME

- Marine Structure Inspections
- Docks and Associated Building and Infrastructure Engineering
- Marine Licences and Consents
- Water Framework Directive and Environmental Impact Assessments
- Bed sampling and Other Environmental Surveys (Including Hydrology)
- Hydrographic Surveys
- Vessel Mounted Laser Scanning
- Submarine ROV Surveys



## RAIL INFRASTRUCTURE

- Contractors Responsible Engineer CRE
- Contractors Engineering Manager CEM
- Designated Project Engineer (DPE)
- Detailed, Visual and Enhanced Examinations - Rail STE2, STE3, STE4, STE5 & STE6 Examination Competencies
- Hidden Critical Element Examinations
- Rail Side Development Advice (BAPA) Asset Protection Negotiation
- Reactive Maintenance Surveys
- Design using GRIP Stages



## BRIDGES, CIVIL ENGINEERING AND INFRASTRUCTURE ASSETS

## HIGHWAYS AND LAND

- General, Principal and Special Inspections - Highways
- Highway Design
- Drainage Investigation and Design
- Design of Resurfacing of Car Park Depots and Access Roads
- Car Park and Depot Design
- Civils 3D
- Topographical Surveys, CCTV Drainage and Services Trace
- Design support on major infrastructure projects



## LEGAL SERVICES

- Forensic Investigations
- Expert Witness
- Civil Cases Expert Support
- Testing of Failed Elements and Interpretative Reports
- Failure Identification and Reporting
- Root Cause Analysis and Identification



## INDUSTRY-WIDE SERVICES

- Asset Management
- Building Information Modelling (BIM)
- Cathodic Protection Design
- Certification for Fixed Access Equipment
- Concrete Repair Specification
- Confined Space Entry
- Consents, Licences and Flood Risk Assessments
- Consultancy
- Contract Administration and Site Supervision
- Defect Investigation and Reporting
- Design Management
- Design using RIBA Stages
- Detailed Design Superstructure and Foundations
- Drone, ROV and UAV Surveys

- Engineering Management
- Feasibility Studies and Concept Design
- Finite Element Analysis
- Foundation Design
- Ground Investigation, geotechnical & earthworks investigations & design
- Health, Safety and CDM Duties and Guidance
- Minor Works and Routine Maintenance Specifications
- Multi-Disciplinary Design and Project Delivery
- Project, Programme and Portfolio Management
- Remedial Work, Maintenance and Repair Specification
- Repair Strategy
- Retainings wall design
- Revit & Civils 3D & 3D visualisations and Fly Through Presentations
- Roped Access

- Specialist Access Inspection
- Steel and Iron Repair Specification
- Strengthening and Refurbishment Design
- Structural Analysis
- Structural Assessment
- Structural Pathology
- Structural Repair Strategies
- Structures Inspection, Investigation and Reporting
- Structures Monitoring
- Temporary Works Design
- Transportation Engineering
- Underwater Surveys (Scour and Structure Condition)
- Working at Height