



**PSA**  
DESIGN

**engineering your environment**

CIVIL, STRUCTURAL, GEOTECHNICAL, TRANSPORT



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## The Consultancy

The consultancy was formed in 1999 to offer a wide range of services to the construction industry.

The company offers design and consultancy services across the spectrum of civil, structural, geotechnical and transport engineering to both public and private sector clients.

This broad expertise is provided in house by the Directors Paul Snape, David Wallbank, John Birtwhistle and Tony Marsh, who together have over 60 years experience in the construction industry.

This expertise is enhanced by a team of experienced engineers and a network of associated professionals whose skills compliment those of our own.

PSA Design operates a quality system based on the BS EN ISO 9000 standards and has achieved ISO 9001 certification through the Lloyd's Register for Quality Assurance.

The company is a Member of the Association for Consultancy and Engineering (ACE) having satisfied the council of its professional ability and standing as an independent firm of consulting engineers. We carry all the necessary insurances including public liability and professional indemnity cover.

Details of specific policies can be provided on request.

Visit our website at [www.psadesign.co.uk](http://www.psadesign.co.uk) to access further information on the company, our projects and staff.



## Services

### Civil Engineering

- Highway & Drainage Design
- Junction & Access Design
- Development Infrastructure
- Highway Maintenance
- Railway Engineering
- Airfields and Airports
- Marine and River Works

### Structural Engineering

- Building Structures
- Structural Surveys and Assessments
- Bridge Design
- Bridge Inspection and Assessment
- Foundation Design

### Geotechnical Engineering

- Ground Investigations
- Geological Assessment and Geotechnical Design
- Earthworks Design
- Landfill and Waste Management
- Contaminated Land

### Traffic and Transportation

- Transport Assessment and Green Travel Plans
- Traffic Surveys
- Safety Studies
- Traffic Management
- Transport Modelling and Traffic Analysis

### Environmental Engineering

- Environmental Impact Assessments
- Noise and Vibration Studies
- Flood Studies
- Rural Issues

### Cost Consultancy

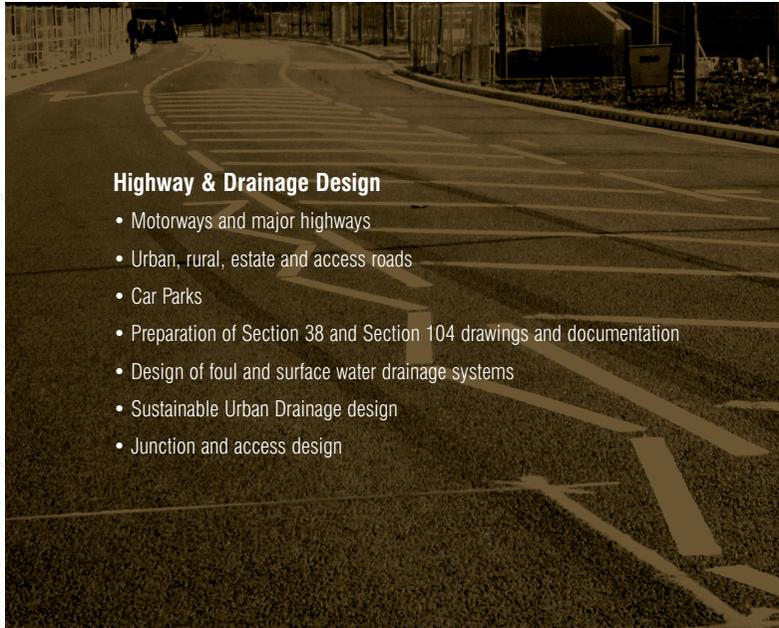
- Quantity Surveying
- Cost Planning and Management
- Contract Management

### Additional Services

- CDM / Planning Supervisor Services
- Project Management
- Expert Witness



# Civil Engineering



## Highway & Drainage Design

- Motorways and major highways
- Urban, rural, estate and access roads
- Car Parks
- Preparation of Section 38 and Section 104 drawings and documentation
- Design of foul and surface water drainage systems
- Sustainable Urban Drainage design
- Junction and access design

## Development Infrastructure

- Development planning
- Regeneration and redevelopment
- Development appraisal
- Urban Design
- Site preparation
- Accessibility and traffic impact
- Lighting design

# Civil Engineering

## Highway Maintenance

- Maintenance assessment surveys
- Visual condition surveys
- Asset management studies
- Overlay and pavement design
- Design of remedial works.

## Railway Engineering

- Outside Parties Minor Works contract
- Station regeneration
- Permanent Way Infrastructure design, including site surveys  
Laser rails "ClearRoute" platform gauging software analysis
- Conceptual and outline design of multi modal interchanges  
combining rail/bus/car/taxi/cyclists/pedestrians
- Network Rail project delivery schemes

## Airfields and airports

- Pavement assessment and design
- Terminal Buildings
- Access Strategies
- Ancillary airfield structures

## Marine and River Works

- Ports and Harbours
- Canal Works
- Marinas
- River Engineering
- Coastal Protection



# Structural Engineering

## Building Structures

PSA Design provide engineering solutions for the following domestic, commercial and industrial structures. Designs are undertaken in all structural materials to the latest design codes.

- Tall buildings
- Analysis and design of complex structures using finite element techniques
- Portal frame buildings
- Housing developments
- Building refurbishments
- Barn Conversions
- Feasibility studies
- Retaining walls
- Water retaining structures
- Construction supervision
- Building extensions

## Structural Surveys and Assessments

- Domestic and commercial survey reports for purchasers and mortgage lenders
- Asset condition surveys for building managers and owners
- Building conversion assessment reports
- Assessment of existing structural load capacities
- Seismic assessment of structures
- Assessment of existing building materials

## Bridge Design

- Composite and RC bridge decks
- Bridge abutments and foundations
- Box culverts and buried structures
- Bridge strengthening schemes
- Feasibility studies
- Construction supervision

## Bridge Inspection and Assessment

- Principal bridge inspections of highway & railway structures
- Assessments of existing bridge structures to provide actual vehicle capacities

## Foundation Design

- Shallow foundations for low rise structures
- Soil-structure interaction
- Shrinkage and swelling/influence of trees in clay soils
- Modifications to existing structures
- Underpinning
- Deep basements/excavations
- Ground improvement
- Reinforced slopes, embankment and soil nailing
- Settlement analysis
- Pavements
- Subsidence
- Cofferdams
- Dewatering



# Geotechnical Engineering

## Ground Investigations

PSA Design's services include feasibility studies, designs, interpretation and expert assessment in the following technical areas for ground investigations:

- Construction
- Foundations and piling
- Difficult and unstable ground
- Groundwater
- Landfill
- Contaminated land
- Mining and quarrying

## Geological Assessment & Geotechnical Design

- Geological mapping, assessment and interpretation
- Geotechnical engineering and stability assessment
- Slope stability design
- Ground improvements
- Geomorphological surveys assessment
- Retaining wall design and other geotechnical structures
- Exploratory boring & drilling
- Mining and quarrying
- Specialist laboratory testing analysis
- Groundwater resource development and pollution
- Mineral resource development
- Hydrogeological assessment and surveys
- Design of surface water management plans including embankments and dams, waste lagoons and settling ponds
- Peat Engineering
- Poor ground, surcharging and use of lightweight fill



# Geotechnical Engineering

## Earthworks Design

- Materials control of site materials including use of recycled construction and demolition materials within new construction, operations and restoration works.
- Computer modelling of material volumes.
- Specification and amendment of design during construction phases.
- Site assessment.
- Construction supervision and quality control.
- Development of specification for earthworks.
- Flood protection works.
- Cuttings and slope assessments.
- Failure investigations.
- Material behaviour including peat engineering
- Poor ground, surcharging and use of lightweight fills.

## Landfill & Waste Management

- Landfill engineering and remediation design
- Volumetric and materials computer modelling
- Surveying, ground modelling and CAD
- Project management, CQA supervision and site investigation
- Waste strategy and licensing
- IPPC authorisation and assessment
- Waste and minerals appraisal and development
- Leachate and Landfill Gas Management
- Contaminated Land Assessment and Remediation
- Landscape Design
- and hydrological assessment

## Contaminated Land

- Desk studies and site inspections
- Site investigation
- Risk Assessment - conceptual models, generic and detailed quantitative risk assessment (use of appropriate risk assessment models such as CLEA, SNIFFER, ConSim)
- Remediation options appraisal
- Consultation with regulatory authorities
- Remediation Strategies and Implementation Plans
- Verification of remedial works
- Application Site Reports and Site Protection and Monitoring Programmes
- Pre-acquisition surveys



# Traffic & Transportation

## Transport Assessment and Green Travel Plans

- Residential Development
- Healthcare Facilities
- Industrial & Commercial
- Retail
- Mineral extraction and waste
- Recreational sports & leisure
- Education
- Input to environmental impact assessments/statements

## Traffic Surveys

- Manual Classified Link and Junction Counts
- Vehicular Speed Surveys
- Origin-Destination Surveys
- Patronage and Car Park Utilisation Surveys
- Mode Shift Surveys
- Employee and Visitor Travel Surveys

## Safety Studies

- Road Safety Audits
- Motorway and trunk road safety reviews and accident studies
- Development of accident remedial schemes

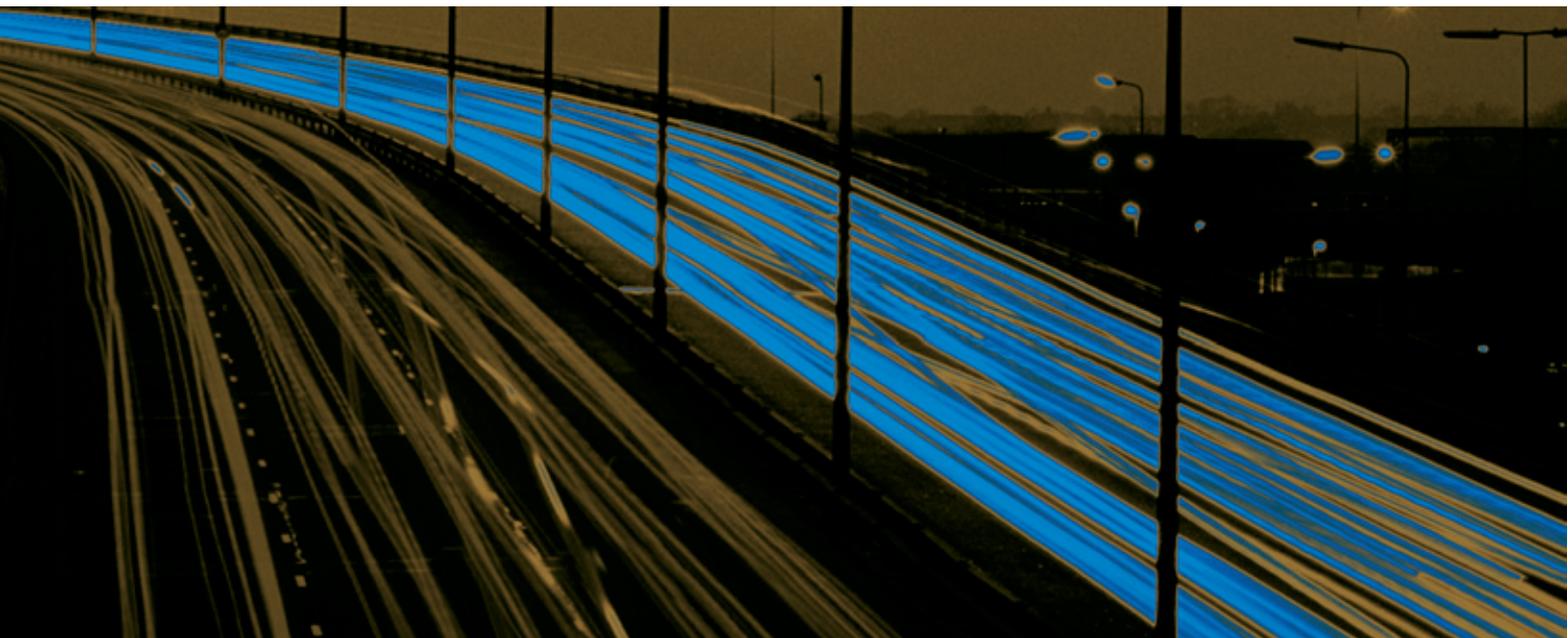
## Traffic Management

- Design and implementation of traffic management schemes
- Crossing Facilities
- Traffic Calming
- Traffic Regulation Orders
- Controlled Parking Zones
- Traffic Flow and Movement Strategies

## Transport Modelling & Capacity Analysis

Transport modelling and capacity analysis is undertaken, for both public and private sector clients using the following software.

- PICADY - simple priority junctions
- ARCADY - roundabouts
- OSCADY/LINSIG - traffic signals
- TRANSYT - linked traffic signal controlled junctions
- AUTOTRACK - swept path analysis



## Environmental Engineering

### Environmental Impact Assessments

- Preparation of impact assessments and studies
- Engineering input to impact assessments and studies

### Noise and Vibration Studies

- Acoustic Surveys
- Vibration Surveys
- Preparation of Acoustic Reports
- Design of Noise Attenuation Schemes

### Flood Studies

- Flood Study Reports for commercial and residential developments
- Design for Flood Mitigation

### Rural Issues

- Quiet Lanes Studies
- Market Town Initiatives
- Farm Diversification
- Equestrian Facilities

## Cost Consultancy

- Quantity Surveying
- Bills of Quantities
- Cost Planning and Management
- Project and Cost Control Services
- Procurement Advice and Contract Documentation
- Contract Administration
- Life Cycle Costing
- Contract Management
- Adjudication and Dispute Resolution
- Employer's Agent Role

## Additional Services

CDM Regulations

Planning Supervisor Services

Health and Safety Plans / Files

Risk Assessments

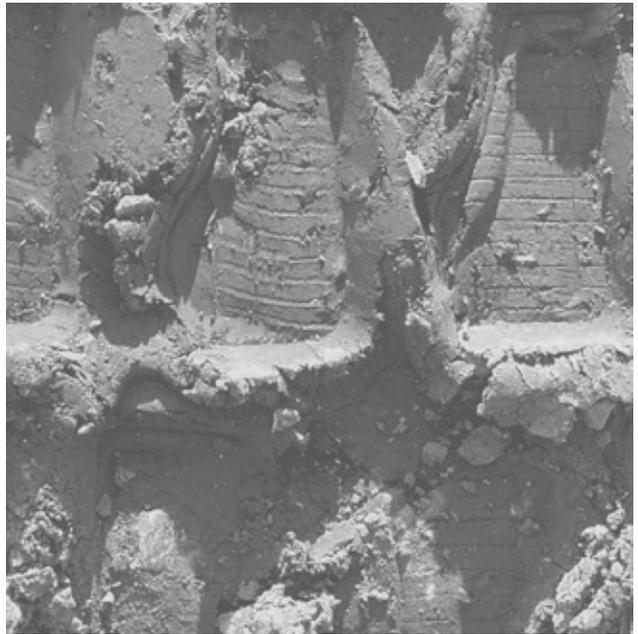
## Project Management

Project Management

Planning and Programming

## Expert Witness

Preparation of evidence to public inquiries, mediations, arbitrations and civil cases.



### **Contact Details**

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