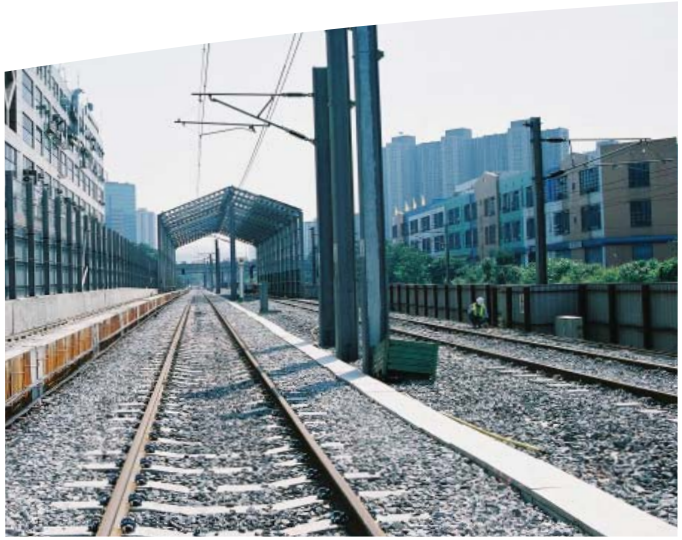
What we can offer

Atkins is one of the leading providers of professional, technologically-based consultancy and support services in the world.

We employ over 18,000 staff throughout our offices worldwide. We are well positioned to undertake a diversity of projects, with a multidisciplinary team spread across a network of offices throughout the UK and overseas in the Americas, Asia and South East Asia, Western Europe, Central and Eastern Europe, and the Middle East.

Geotechnical Skills & Services

- engineering geology & geohazards
- environmental geotechnics
- engineering geomorphology
- advanced geomechanics
- rock & soil slope stabilisation
- earthworks
- foundations & substructure engineering
- highways geotechnics
- rail geotechnics
- river & coastal geotechnics
- offshore geotechnics
- water supply & sewerage geotechnics
- nuclear geotechnics
- tunnel & shaft engineering
- due dilligence & expert witness



Key Contacts

For further details regarding our capabilities please email:
geotechnicalengineering@atkinsglobal.com

Office Locations
UK & Ireland

Our UK & Ireland offices include:

Aberdeen
Altrincham
Barking
Belfast
Birmingham
Bristol
Cambridge
Cardiff
Chelmsford
Chippenham
Colwyn Bay
Cork
Crewe
Croydon
Cumbria
Derby
Dublin
Edinburgh
Epsom
Exeter
Gillingham
Glasgow
Gloucester
Havant
Haverfordwest
Ipswich
Knutsford
Leeds
London
Maidstone
Manchester
Newcastle-under-Lyme
Newcastle-Upon-Tyne
Newport
Northampton
Nottingham
Oxford
Peterborough
Plymouth
Pontypridd
Reading
Sale
Scunthorpe
Sheffield
Southampton
St. Asaph
Stockton-On-Tees
Swansea
Swindon
Taunton
Telford
Warrington
Warwick
Winchester
York

ATKINS

Rail Geotechnics

Project Experience

Folkestone to Dover Coastal Railway, Kent

Atkins was appointed to determine maintenance requirements for a 10km section of coastal railway line between Folkestone and Dover. The line crosses 3km of active landslides at Folkestone Warren and then passes along the foot of 150m high chalk cliffs and through tunnels hewn in the cliffs.

Our approach was to reivew the condition of the Warren landslide and adjacent sea cliffs, and then to model the effect of a variety of stability enhancment techniques. This enabled us to draw up a programme for renewal of the coastal defences and for observation and maintenance to ensure the integrity of the railway over the next ten years.

AVE High Speed Railway - Technical Audit, Cordoba to Seville

A major landslip during construction of Spain's first European-gauge high speed railway led to the commissioning of Atkins to provide an independent check on the engineering of the final 125km of the scheme between Cordoba and Seville.

Our risk assessment addressed the following:

- geology and geomorphology
- aerial photography interpretations
- construction records
- stability of approach cuttings
- stability of rock faces above tunnel portals
- integrity of tunnel linings
- long term monitoring

Project Experience

Chalfont Railway Cutting, London - Remedial Works

Heavy summer rainfall resulted in failure of the cutting between Chalfont and Chorleywood and the consequent closure of the Metropolitan Line. Atkins was commissioned initially to advise on immediate stabilisation works which allowed rapid opening of the service.

Following further investigations, we designed a gravity slope drainage system as permanent remedial works to prevent a reoccurrence of the failure. The system included a deep drain which intercepted the surface and near surface run-off and allowed it to be passed into a series of deep soakaways away from the cutting.

Embankment Stabilisation, Ilkley, Yorkshire

Atkins was commended by the Institution of Civil Engineers for "excellence in concept, design and execution" of the Ilkley Embankment Stabilisation works. Our geotechnical engineers used a multidisciplinary approach to develop stabilisation measures for a railway emabankment crossing a 1km wide landslide complex on a key commuter route into Leeds. The railway had suffered continuous ground movement associated with landsliding which originally started about 10,000 years ago after the last ice age.

Project Experience

Docklands Light Railway, Extension to Lewisham - London - Cutty Sark Station Box

Atkins was the design consultant for the 4.2km extension of the Docklands Light Railway beneath the River Thames to Lewisham. The station box at Cutty Sark was a particularly demanding structure, being 60m long, 25m wide and 23m deep.

Finite element and finite difference modelling of the station box was undertaken to:

- validate simplified limit equilibrium methods of analysis
- investigate complex soil-structure interaction aspects
- evaluate ground movements associated with top-down construction
- investigate possible cost savings associated with a full 3D analysis approach

District and Circle Lines - Covered Ways 12 and 58, London

Covered Ways 12 and 58 are shallow cut-and-cover nineteenth-century railway tunnels located 300m south of High Street Kensington Station in London.

Major strengthening works were carried out during two track possessions. As part of this work, Atkins was commissioned to investigate and advise on geotechnical and soil structure interaction aspects of the project and to assess the strength and stability of the existing abutment walls.