Byland Engineering Limited - Curriculum Vitae

James Binns, Geotechnical Engineer & Director

Profession:	Geotechnical Engineer & Director
Year of birth:	1981
Nationality:	British
Marital Status :	Married
Specialisation:	Engineering Geology & Geotechnics
Education/professional achievements:	2002 - BSc (Hons) Geography & Geology, University of Leeds. 2005 - MSc Engineering Geology, University of Leeds 2005 - Fellow of the Geological Society (FGS) 2006 - City & Guilds 2D AutoCAD 2007 - YGG Young Engineer Presentation Competition Winner 2013 - Member of the Institution of Civil Engineers (MICE) 2013 - Chartered Civil Engineer (CEng)

Relevant Experience

A Chartered Civil Engineer specialising in geotechnical engineering with over 15 years' experience on a wide range of projects including :

- Site investigation specification, planning, supervision, management, reporting and interpretation
- Analysis and detailed design of foundations, retaining walls, slopes, ground anchors, piles, soil nails and reinforced earth
- Back analysis and interpretation of pile, soil nail and ground anchor test results
- Optimisation of foundation schemes
- Production of tender and contract design calculations for a wide variety of contractors
- Production of contract design drawings
- Project management of large geotechnical schemes

Proficient in the use of geotechnical analysis software including gINT, Piglet, Wallap, Repute 2, GRLWEAP, Talren, Dips, Slope, Pile, Adsec, Alp, Pdisp & Xdisp.

Experience record

Highlighted Projects, September 2005 to present: Byland Engineering Limited

Nelson, Lancashire
Investigation of a landslip at a manufacturing facility in Lancashire. Designed & supervised site investigation works, undertook back analysis of failure, designer of 2 No. ~200m linear lengths of tied back embedded retaining wall comprising both contiguous bored piles and steel sheet piles. Assisted the Client and Main Contractor throughout all phases of the project.

Renfrew
Designer of ground improvement rigid inclusions for a warehouse development on soft Alluvial soils. Detailed design calculations carried out using 2D finite element analysis.

Leicester
Design of reinforced soil walls up to 7m in height using site won fill materials. Services included design & detailing of the reinforced soil, production of a GDR to HD 22/08 including Specification Appendices. Additionally, produced AIP's for TAA approval.

Chesterton Footbridge, Cambridge
Designer of reinforced concrete abutment & wing wall bearing piles for a new iconic footbridge, steel tube bearing piles for an over water jetty walkway and a steel sheet pile embedded retaining wall. Additionally, produced F002/F003 forms for Network Rail approval, HD 22/08 & BD 2/12 forms for ultimate Client, Cambridge City Council.

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Corsham Street
Designer of a secant pile retaining wall for a ~16m deep 4 level basement for a new hotel development in London. The design was co-ordinated with the Main Contractor's construction programme and temporary works propping design.

Heathrow Kilo
Designer of 286 No. multi-stage ground anchors with service loads in the order of 725-850kN to provide temporary restraint to 1.2m thick diaphragm walls for a ~15m deep basement. Scope of design included optimisation of the scheme with the Consulting Engineer, advice on reservation sleeves within diaphragm walls, specification & analysis of preliminary test anchors, design & detailing of prefabricated steel anchor head units & certification of anchor acceptance and suitability tests.

Rogiet Road Bridge
Designer & CRE for new bearing piles supporting a new road over rail overbridge at Rogiet Road, adjacent to Severn Tunnel Junction Station in South Wales. Produced detailed design calculations, schedules & assisted with construction queries.

Grantley Hall
Designer of two phases of basement construction using secant pile walls to enable conversion of an existing country house to a luxury hotel venue. Produced detailed calculations in accordance with Eurocode standards, optimised pile layouts & produced pile schedules.

Angel Gardens
Designer of contiguous pile walls with retained heights in the range 6-8m and bearing piles to support a prestigious 34 storey residential development in northern Manchester. Optimised the axial design capacity only requiring minimal rock sockets, which were validated in working pile load tests.

Tadcaster Bridge
Designer of raking pali radice micropiles to strengthen existing foundations and vertical micropiles to support new bridge piers for the reconstruction of Tadcaster Bridge following partial collapse during a flooding event.

A1 Soil Nail Highway Widening Schemes
Lead designer for soft faced steepened earthwork soil nail slopes and hard faced soil nail walls on two major A1 highway widening schemes. Produced detailed calculations, contract drawings and reviewed test results.

Rock Slope Stabilisation, Jersey
Designer of a stabilisation scheme to an existing near vertical rock slope excavation for a house extension. Tasks included logging of the rock face to identify potential mechanisms of instability and determine design parameters. Produced detailed design calculations and contract drawings.

Sandsend – Contiguous Pile Wall with Passive Ties & Gravity Retaining Walls
Optimisation and detailed design of a retaining scheme to enable excavation into the toe of an existing slope for construction of 3 No. new residential houses.

Apperley Bridge & Kirkstall Forge – Bearing Piles
Designer of approximately 175 No. hollow stem sectional flight auger piles and 100 No. bottom driven steel cased piles in restricted access conditions adjacent to a live railway for construction of two new railway stations. Produced detailed design calculations in accordance with Eurocode & Network Rail standards.

Girvan – Soil Nail Design
Designer of a 50m long, 8m high soil nail slope at 65° to the horizontal to permit expansion of a whisky distillery. Produced detailed calculations and a construction drawing for the scheme. Provided technical advice to the contractor during the works, specified and analysed the results of sacrificial soil nail pull out tests.

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MCFC – Ground Anchor Monitoring
Project manager for the monitoring of 56 no. vertical ground anchors with loads up to ~2000kN, supporting the roof structure at the City of Manchester Stadium. Checks included inspection of the inner and outer cap and selected strands for signs of corrosion and lift off checks on all anchors to verify the load. Produced a report detailing the results of the inspections and lift off checks.

Various London Schemes – Ground Movement & Building Damage Assessments
Preliminary design of residential basements up to 10m deep, including outline temporary propping details. Analysis of ground movements due to embedded retaining wall installation and subsequent basement excavation resulting in a prediction of the building damage classification in accordance with Ciria C580. Provided recommendations on construction sequence to mitigate ground movements.

Ground Anchor Project Management
Package manager for a £2 million pound sub-contract installing 231 no. temporary ground anchors at the UK's busiest airport. Responsible for all aspects of the sub-contract works from tender through to completion including programming, health & safety review, technical design checking, temporary works design & commercial aspects.

MSI Quality Forgings, Doncaster - Ground Investigation & Retaining Wall Design
Planned, supervised and reported on an intrusive ground investigation to categorise ground conditions and design parameters. Designed a secant pile wall forming a box type structure to allow construction of a forging hammer anvil foundation base. Managed tender process to piling and reinforced concrete contractors and assisted client in tender meetings & contract award.

GSM-R Project - Ground Investigation and Production of Design Drawings
Project manager for the production of AutoCAD drawings to permit design submissions for the construction of infrastructure on the railway. Undertaker and factual report author of more than 50 ground investigations at locations throughout the UK. Actively involved in the continuous development of new and more efficient systems of work.

Coventry St John's – Secant Bored Pile Wall
Designer of a temporary cantilever bored pile wall with retained heights up to 10m. Reviewed ground conditions, assessed geotechnical data, selected geotechnical design parameters, undertook computer analysis, geotechnical and structural design of piles. Produced complete calculation pack. Scheme was nominated for a Ground Engineering Award.

Leeds Metropolitan University - Ground Investigation
Planned and undertook a ground investigation for a residential redevelopment, including window sampling, dynamic probing and trial pitting. Recorded ground conditions and produced engineering logs to BS5930, produced geotechnical testing schedules, undertook groundwater and gas monitoring. Author of the interpretative geotechnical report.

Aberdeen Airport - Earth Retaining Structures
Author of a number of earth retaining structure options reports and detailed design of preferred option. Tasks included analysis of ground investigation data, identification and comparison of suitable retention methods, selection of a preferred option, production of AutoCAD drawings and cross sections, detailed construction cost estimates.

Immingham - Ground Investigation Report
Supervised ground investigation for a proposed link road over soft compressible soils. Scheduled tests on soil samples, checked draft report and checked applications for payment. Produced relationship charts and slope stability and settlement studies and wrote the engineering report to HD22/02.

Gas Pipeline - Ground Investigation Report
Co-author of a large ground investigation report for a proposed gas pipeline some 50km long in East Yorkshire. Responsibilities included summarisation of provided geotechnical data, production of relationship charts, analysis of particular underground crossings and preparation and checking of route section and route crossing summary forms.