

## STEPHEN ANDREW FOSTER

---

### EDUCATION

- BA (First class honours), Engineering, Trinity Hall, Cambridge (1976)
- MA (Cantab) (1978)
- CEng (1987)

### AFFILIATIONS

- Member of the Institution of Civil Engineers
- Member of the British Geotechnical Association
- Member of the Midland Geotechnical Society

### EXPERIENCE

#### 2002 – PRESENT - DIRECTOR - RAISON FOSTER ASSOCIATES

Director of a small Geotechnical Consulting Engineer, providing specialist geotechnical advice and design to a range of clients within the construction industry.

#### Principal Current Areas of Specialisation

Pile and retaining wall design, slope stability, settlement analysis, earthworks and general geotechnical design, design project management. Projects include major transport infrastructure works, basement retaining walls and stability problems. Clients range from major consulting engineers to a variety of specialist contractors.

#### Selected Projects

- London NW1 Euston Road, Unison HQ. May Gurney. Design of contiguous pile walls to a basement excavation in central London adjacent to highways, main services and existing structures.
- Belfast, Duncrue Street. FK Lowry. Design of secant pile walls to a deep excavation for a new waste incinerator plant constructed on soft alluvial soils. Design of load bearing piles to support structures and plant.
- Ystrad Rhondda Station platform extension. Van Elle. Design of piling works as part of a station upgrade scheme in South Wales.
- N6 Galway - Ballinasloe. N6 Construction Ltd (Contractor JV). Category III design check on earthworks design for 56km of new dual carriageway highway in Ireland.
- London SE8, Creekside. May Gurney. Design of secant pile walls and load bearing piles for a large residential re-development on a former industrial site close to the River Thames. The scheme included ground retention for a 2 storey basement.
- A453 trunk road upgrade. Van Elle. Pile design for a highway upgrade in Leicestershire, including foundations for high containment barriers on approaches to a main line railway crossing.
- Market Deeping. Anglian Water. Category III design check on proposals for service installations by boring beneath an operating railway, including settlement predictions.
- Rhuddlan Castle, North Wales. Cadw. Review of slope stability problems on a historic 14<sup>th</sup> century castle site. Design and detailing of stabilisation works involving extensive re-grading.
- Crewe to Kildgrove Electrification. WS Atkins. Project management as part of the Atkins team of all geotechnical issues relating to the electrification of 16km of railway on a fast-track programme. Geotechnical input included foundations for OLE structures, retaining walls and unstable slopes.
- Oxford, Radcliffe Hospital. May Gurney. Design of secant pile wall to a new hospital unit on a sloping site in close proximity to live hospital buildings.

- Norwich, Chapelfield. May Gurney. Design and detailing of contiguous pile walls and capping beams for a 12m deep basement on a city-centre site. Input to a range of cantilever, single propped and multi-propped walls in both temporary and permanent conditions. Design of a contiguous pile abutment to a highway underbridge.
- Castle Quay, St Helier, Jersey. Amplus. Design of contiguous pile walls and piled foundations to a major commercial development, with basement car park, situated on reclaimed land by St Helier harbour. The design included tension piles drilled into granite bedrock for crane and flotation loads.
- Shelford Landfill, Kent. Caracrown Consultants. Stability analysis for a major earthworks bund for the extension of a landfill site. Settlement analysis along the route of a proposed gas main diversion along the line of the bund

## **2000 - 2002 - SENIOR GEOTECHNICAL ENGINEER - WS ATKINS**

Senior Engineer and deputy leader of Atkins' transportation geotechnics team, based in Birmingham.

### **Selected Projects**

- West Coast Route Modernisation OLE Project. WCRM OLE Alliance. Project management as part of the Atkins team of geotechnical design issues relating to installation of over 1000 new masts on existing main line railway embankments.
- M6 Toll (Birmingham Northern Relief Road). CAMBBA. Geotechnical works relating to three railway underbridges on a design & build motorway project. Developed ground investigation proposals, worked with bridge designers and railway engineers to progress solutions from outline design. Geotechnical input to approvals documents, specifications and drawings. Checking temporary works proposals, earthworks design, general review of geotechnical issues on the project.
- M42 Junction 3, Forshaw Heath Lane. Warwickshire County Council. Design and detailing of remedial works to a failed highway embankment using lime modified soils, combined with re-grading, gabion retaining wall structures and drainage improvements.
- Railtrack Midlands Zone Structures Framework Contract. Birse Rail. Design and geotechnical review of a large number of maintenance and remedial works schemes for the Midlands' railways including bridge infills using geo-grid reinforced soil, embankment and cutting stabilisation using soil nailing, re-grading and retaining structures. Piling to a replacement bridge over the A41 at Wolverhampton.
- Stafford, River Sow flood alleviation. Environment Agency. Geotechnical review of design and construction proposals for a town centre project using anchored sheet-pile walls and mini-pile walls.

## **1999 – 2000 - ENGINEERING MANAGER - KELLER GROUND ENGINEERING**

Engineering Manager responsible for piling projects, based at Coventry.

### **Selected projects**

- Coryton Refinery, Essex. Bechtel. Trouble-shooting of piling problems on a Thames Estuary refinery site, working with client to commission investigation and testing. Review of ground conditions, test results and piling records, production of technical report identifying problems and options.
- Ashford, Kent, J.Sainsbury. One of a number of "partnering" projects involving a range of geotechnical issues including piling, ground improvement and retaining structures for large supermarket developments.

## **1986 – 1999 – COMMERCIAL MANAGER - KELLER GROUND ENGINEERING**

Responsible for commercial side of piling business, including tendering, tender design and winning work. Member of various committees of the Federation of Piling Specialists (FPS).

### **Selected projects**

- Channel Tunnel Rail Link. Laing. Design and commercial support to a contractor on design and build proposals for two CTRL sections, including piling to structures and retaining walls.
- Rugby Cement Works. AMEC. Piling to a major industrial project on a deep, backfilled clay pit.
- London E14, Canary Wharf, Citibank. Canary Wharf Contractors. Large diameter piling to a 20 storey tower.
- London SE10, Greenwich, Millennium Dome. New Millennium Company. Driven and CFA piling on a contaminated former gas-works site.
- Newcastle, Cradlewell by-pass. Sir Alfred McAlpine. Extensive contiguous bored pile walls on an urban highways project.
- Manchester, Trafford Park, Allied Mills. Large diameter bored piling on a brownfield site.
- Wednesbury, West Midlands, Index Distribution Centre. Wates Construction. Driven piling.
- Connahs Quay Power Station. GEC Alstom. Development of proposals for driven piles to a new gas-fired power station adjacent to the River Dee.
- London SW6, Putney Railway Bridge refurbishment. Tilbury Douglas. Bored piling in limited headroom within sheet pile cofferdams within the River Thames.

### **1984 – 1986 – CONTRACTS MANAGER - GKN KELLER FOUNDATIONS**

Contracts management of the company's bored piling activities.

#### **Selected projects**

- Liverpool, Albert Dock refurbishment, Granada TV. Tarmac.
- M42, Kingsbury section. Sir Alfred McAlpine.
- London N3, Finchley, Regents Park Road. Bovis.
- Dorchester Hospital extension. Laing.
- Milton Keynes, V8 canal bridge. Galliford Construction.

### **1980 – 1984 – PILING ENGINEER - GKN KELLER FOUNDATIONS**

#### **Selected projects**

- A45 Irchester by-pass, Northants. Sir Alfred McAlpine.

### **1977 – 1980 – SOILS ENGINEER - GKN KELLER FOUNDATIONS**

In ground investigation department, undertaking site supervision, assessment and reporting of results, including interpretative reports.

#### **Selected projects**

- A40/A48 Carmarthen Southern by-pass. Sir Howard Humphries & Partners. On site for an extensive highways investigation. Design issues included a major river crossing, a railway bridge, embankments on soft alluvial soils and rock cuttings. Prepared factual reports.
- Birtley, Co. Durham, Caterpillar Ltd. WA Fairhurst & Partners. Industrial development on a backfilled clay pit. Interpretative reporting considered settlement rates and profiles and benefits of pre-loading.

### **1976 – 1977 – GRADUATE ENGINEER - REDPATH DORMAN LONG (CONTRACTING)**

Initial post-graduate post, including 6 month contract at Posford Pavy & Partners, Consulting Engineers.