

## Movable Structures and Associated Projects

### Schedule of Involvement of the Company and its Personnel

<u>Project</u>	<u>Client</u>	<u>Description</u>
Great Wharf Bridge	Giffords	Exemplary design of lifting mechanism for four lane bridge
Bellmouth Bridges	Techniker	Mechanical design for movable bridges in the Canary Wharf development
Torquay Pedestrian Footbridge	C Spencer Ltd	Footbridge and inner harbour impoundment. Detail mechanical and structural detail of footbridge and dock impounding gates.
Port Tawe Footbridge	Flint and Neill	Exemplary design of slewing pedestrian footbridge.
Falkirk Wheel Boatlift	Butterley Engineering Ltd	Mechanical design services for barge lifter to replace locks linking Forth and Clyde and Union canals
Glasgow Science Centre Bridge	C Spencer Ltd	Design in conjunction with Building Design Partnership
River Yeo Bridge	Devon County Council	Design of mechanical and electrical control systems for cycle and footbridge
York Millennium Bridge	C Spencer	Manufacturing drawings and design of temporary works for foot and cycle-way bridge
Chamberlain Bridge	Maunsell Ltd	Mechanical and electrical design for lift bridge in Barbados
Sammy's Point Bridge	Jubb and Partners	Mechanical, electrical and hydraulic design services for the articulated foot and cycle bridge for The Deep Millennium Project, Hull
Forth and Clyde Canal Bridges	C Spencer Ltd	Design of three lift bridges and design of the refurbishment of two swing bridges
Grimshaw Lane Bridge	Fairfield Automation	Design of mechanical and hydraulic systems for replacement lift bridge over Rochdale Canal
Pembroke Dock Ro-Ro Extension	C Spencer Ltd	Detailed design of variable loading pontoon flotation system and hydraulic, electrical and mechanical equipment.
Big Idea Bridge	C Spencer Ltd	Detail design of structure, mechanical and electrical drive system and controls for movable bridge at Irvine, Scotland
Goole South Dock Swing Bridge	Associated British Ports	Investigation and proposals for in-situ deck renewal, including proposals for remedial treatment of corrosion
Baltic Millennium Bridge	Gifford and Partners	Mechanical and electrical design in partnership with design and construction team for movable footbridge on River Tyne at Gateshead
Humber Bridge	GiffordHumber Bridge Board	Various stress analysis projects using Finite Element Analysis including detail modelling of the deck structure and calculations of live load reactions.
Forton Lake Bridge	Maunsell Ltd	Design and production of detailed manufacturing drawings for the mechanical and electrical systems for movable footbridge over Forton Lake at Gosport
Lowry Centre Bridge	Christiani and Nielsen	Design and production of detailed manufacturing drawings for the mechanical and electrical systems for movable footbridge at Lowry Centre, Salford Quays
St Katharine's Dock	Taylor Woodrow Property Management	Retained as mechanical consultants for the upgrading and conversion to remote operation of Red Road, Coronarium, White and Telford bridges; also lock gate and sluice mechanism
Longbird Bridge	Maunsell Ltd	Mechanical and electrical inspection of swing bridge in Bermuda
Poulton Road Bridge	Butterley Engineering Ltd	Design check of all mechanical and electrical works for swing bridge at Birkenhead
Chatham Maritime Bascule Bridge	Boving Newton Chambers	Detailed design of bridge including structural and mechanical requirements and production of detailed manufacturing drawings