



QUALTER HALL



Project engineering and manufacture

introduction



Berth 26 double deck Ro-Ro linkspan | Dublin Port



Blast furnace skip hoist
Corus Port Talbot works



Lugner City bridge | Austria



Control panel for Two Mile Bend swing bridge
Gloucester South West Bypass

Qualter Hall, founded in 1860, continues to demonstrate a history of engineering excellence both in the UK and internationally.

With a team of specialist staff dedicated to mechanical, structural, electrical, electronic and fluid power engineering, supplied by a flexible, comprehensive manufacturing facility, we can undertake complete multi-disciplined turnkey contracts, reconstructions, refurbishments and plant upgrades.

We take projects from the initial conceptual planning stages, through design, manufacture, installation and commissioning to final commercial operation.

Our recent work includes

Project Engineering

- Moving bridges
- Static bridges
- Ro-Ro linkspans
- Water control gates
- Winches and haulages
- Nuclear waste handling (special projects involving robotics with fully integrated control systems)
- Other specially designed engineering requirements

Manufacturing

- Specialist structures
- Railway rolling stock components
- Nuclear waste storage boxes
- Architectural steelwork

Mining

- Mine shaft systems
- Mine winders and haulages
- Underground transportation systems

Controls

- Electrical, electronic, hydraulic and pneumatic systems, fully integrated to suit specific installations



Qualter Hall incorporating

MB Wild, Robey and Needham Brothers and Brown | Hoisting, winching and haulage technologies
GMT | Surface and underground transport systems
Hugh Smith Engineering | Shipyard presses, benders, rolls and edgemills

project engineering

Qualter Hall provides a complete multi-disciplined service in the field of bespoke turnkey project engineering for new equipment, reconstructions, refurbishing and upgrading of plant.



Nuclear charge machine waiting despatch from Qualter Hall | Sellafeld

Using our own integrated internal design capability, manufacturing expertise, control system engineering and site installation skills under the control of our own project management team, we provide high quality, competitive solutions to complex engineering requirements in the shortest possible timescales.

Our services

- Consultancy
- Project management
- Design
- Manufacture and supply
- Installation
- Commissioning
- Service support



Offshore training facility Hull



Eight emergency escape platforms for the Spinnaker Tower | Portsmouth Harbour



Swing bridge | Fretherne



British Museum roof | London



Nuclear waste retrieval machine under test at Qualter Hall



Ro-Ro linkspan installation of top deck | Dublin Port

bridges



Double leaf pedestrian swing bridge over the River Liffey | Custom House Quay, Dublin



We provide new supply, reconstructions, refurbishment and upgrading on a vast range of both moving and static bridges, incorporating many different types and requirements.

‘New concept’ pedestrian swing bridge in Hull
Qualter Hall were the design competition winners with this innovative solution, incorporating space for a restaurant/bistro within the bridge.
This unique landmark bridge is in permanent contact with the west bank of the River Hull allowing pedestrians to walk on or off the bridge during its rotation.



Double bascule pedestrian bridge | Scarborough Harbour

- Bridges**
- Fixed bridges
 - Modular bridges
 - Swing bridges (single and double)
 - Bascule bridges (single and double)
 - Retractable bridges
 - Lifting bridges
 - Other bespoke bridge types and requirements



Operating and control systems for Bellmouth Bridges | Canary Wharf



Modular bridge | Bangladesh



Two Mile Bend swing bridge Gloucester South West Bypass



Pedestrian access swing bridge | The Deep, Hull

ports, docks, harbours, marinas waterways and hydro

We provide new supply, reconstructions, refurbishment and upgrading on a multitude of applications.

Applications

- Ro-Ro linkspans
- Passenger access facilities
- Crew access facilities
- Slipway systems
- Boat lifts
- Dock pumping systems
- Water control gates
- Other bespoke requirements



Berth 26 double deck Ro-Ro linkspan | Dublin Port



Slipway carriage and winching system | Kilkeel Harbour



Complete new turnkey control system for the upper deck and viaduct 3 of berth 3 Ro-Ro linkspan | Portsmouth



Passenger access facility | Dover Harbour



Crew access facility | Jersey Harbour



Berths 1 and 3 adjustable Ro-Ro ramps
Humber Sea Terminal



Aerial view | Humber Sea Terminal



Intake screens | Seilich Dam



Vertical lift bulkhead gate
Ffestiniog hydro-electric power station



Flood alleviation scheme three radial sluice gates | Leigh Barrier



Marygate floodgate | York



Bow locks two pairs of mitre gates
London

Qualter Hall offers a full range of water control gates for use in river flood control, harbours, locks, hydro-electric power schemes and irrigation including

- Mitre gates
- Sector gates
- Flap gates
- Fish belly flap gates
- Radial gates
- Vertical lift gates
- Stoplogs

hoists, winches, haulages and transportation systems

hoists, winches, haulages and transportation systems | Qualter Hall



Blast furnace skip hoist | Corus Port Talbot works



Slipway carriage and winching system | Kilkeel Harbour



Three of six synchronised winches for Ro-Ro linkspan, providing combined lifting capacity of over 1200 tonnes | Dublin



Hoist for crew access facility | Jersey

With the successful integration of MB Wild, Robey and Needham Bros. & Brown into the already successful Qualter Hall Mining Division, we have the technical excellence to provide bespoke hoisting, winching and haulage systems for a multiplicity of applications.

Applications

- Ro-Ro linkspans
- Moving bridges
- Slipway haulages
- Man riding access platforms
- Water control gate operation
- Passenger access systems
- Funicular railways
- Offshore drilling rig/hauser control
- Blast furnace feed systems
- Other bespoke requirements

With our extensive winch control expertise, we can electronically synchronise multiple winch units to provide massive lifting capacity where necessary.

In addition, with the incorporation of GMT into Qualter Hall we can also offer complete integrated rope hauled transportation systems based on proven technology employed successfully in many mining and commercial applications.



Gate hoists for hydro-electric project, works assembly and load testing | Nathpa Jhakri, India



Synchronised access winches for nuclear decommissioning | Sellafield



Braked chock transporter | Canada



Endless rope haulage complete with tensions | Tabas Mine, Iran



Manriding cars | Tabas Mine, Iran

control systems



Control panel for Hermitage Lock refurbishment | Cambridgeshire

The controls division at Qualter Hall offers electrical, electronic, hydraulic and pneumatic systems.



Berth 5 and 6 control system refurbishment | Dover

Our in-house capabilities include

- Hydraulic control systems and equipment
- Pneumatic control systems and equipment
- Programmable logic controller systems
- Computer based supervisory systems
- Provision of power distribution equipment
- Motor controls and AC / DC drive equipment
- Associated plant monitoring and control equipment
- Plant and machine cabling
- Functional safety including control systems to BS EN 62061, BS EN ISO 13849 and BS EN 954-1, or international equivalents
- Statutory international electrical and safety audits
- Site supervision
- Installation
- After sales servicing



Lagan swing bridge slew drive power pack
Scotland



Operating and control systems for
Bellmouth Bridges | Canary Wharf



Hydraulic power pack | Shoreham Port



Control panel for Two Mile Bend swing
bridge | Gloucester South West Bypass



Complete new turnkey control system for the upper deck and viaduct 3 of berth 3 Ro-Ro linkspan | Portsmouth

renewal and plant upgrade

For Qualter Hall, a natural progression from provision of new turnkey installations, is to offer renewal and upgrading of existing equipment.



Five river control gates and control system replaced with modern design | Sponden Sluice



Refurbishment of North Bridge | Hull

Employing the same internal resources used on new systems, we are able to

- Identify the client's requirements and performance targets
- Evaluate and assess the current condition/capacity of existing plant
- Design and implement modifications/repairs as necessary
- Maintain maximum availability of existing equipment
- Minimise disruption to existing service
- Provide on-going support for revised arrangement



Lock gate control systems | Aire and Calder Canal



Refurbishment of Stwlan bulkhead gate | Ffestiniog hydro-electric power station



Refurbishment of swing bridge | Whitby



Hangar doors drive and control system | Heathrow Airport



Overhaul drive mechanism | Grimsby Heritage Bridge



Overhaul drive mechanism including provision of new rolling racks | Poole Harbour Bridge



Divers remove existing gate and fit buoys



Gate towed to shore



Gate lifted onto transport



Refurbishment of gate in Qualter Hall works prior to re-installation at site

site installation and servicing



Eight emergency escape platforms for the Spinnaker Tower | Portsmouth Harbour



Installation of double leaf pedestrian swing bridge over the River Liffey | Custom House Quay Dublin

Qualter Hall has the experience of completing site works in all capacities to meet current CDM regulations.



Skip and cage shaft headgear installation Harworth Colliery



Installation of Two Mile Bend swing bridge Gloucester South West Bypass

In addition to the installation within our project engineering activities, our site services division carries out:

- Installation of third party equipment
- On site inspection of existing plant
- Condition surveys and reports
- On-going contract maintenance and servicing

Our specialist site engineers are fully conversant with current legislative requirements, including CDM and hazardous/confined working regulations.



Ro-Ro linkspan installation of top deck Dublin Port



Installation of blast furnace top structure | Scunthorpe



Stage one of erection of crane Purfleet Thames Terminal



Stage two | Purfleet Thames Terminal



Stage three | Purfleet Thames Terminal

manufacturing

Our design and project management expertise are supported by over 12,000 m² of production facility, providing a true turnkey capability.



CNC multi axis machining centre

We offer a comprehensive and flexible approach to manufacture. A vastly experienced production engineering team assisting our design engineers with manufacturing and assembly techniques, supported by a highly skilled, apprentice trained workforce including coded welders, fabricators, CNC machinists, mechanical and hydraulic fitters, preparation and painting personnel, combine to provide a quality service second to none in our field.



CNC laser cutter

State of the art plate profiling

- 6 axis, 4kW laser cutter capable of cutting sheet material up to 25mm thick, complete with laser etching, auto plate handling and CNC rotary chuck. Plate capacity up to 3050mm x 1525mm
- High definition and standard plasma cutting machine complete with 2 oxy-fuel torches, powder marker, drill head and triple bevel cutting head. Plate capacity 3000mm x 12000mm
- Twin head plasma cutting machine and plasma arc marking system for cutting plates in tandem. Plate capacity up to 6000mm x 14000mm



Stainless steel nuclear storage boxes on robot welder

Comprehensive welding capability

- Manual and semi automatic welding including MIG, MAG, MMA, TIG and plasma keyhole
- Fully automatic 6 axis welding robots fitted with MAG and plasma keyhole welding system
- Semi automatic submerged arc welding facility up to 30m in length
- Welding qualifications and procedures to BS EN 287 and BS EN 288, plus the requirements of DIN 6700 part 2 and others, in many different joint configurations, positions and materials, including carbon steel, stainless steel and aluminium



CNC horizontal machining centre

Machining facilities

Significant recent investment has provided the most up to date, modern CNC multi axis machining centres available.

- Range of bridge and column type machines with beds up to 2550mm x 8000mm
- CNC lathes
- Horizontal boring machines



Railway rolling stock cab end



Fabrication of channel tunnel locomotive bogies



Fabrication of swing bridge for Gloucester South West Bypass

Fabrication facilities

- Extensive fabrication workshops with craneage up to 40 tonnes lifting capacity with 16m maximum clearance under hook
- 600 tonne CNC x 6m press brake
- Segregated, 'clean', stainless steel manufacturing workshops, complete with welding robot, dedicated machining centres, bead blast facility and assembly area



Cab end on robot welder



CNC press brake for plate bending



CNC twin headed plasma cutting machine



Tandem spray bake booths, provide additional flexibility

Painting facilities

Our comprehensive blasting and ‘spray bake’ painting facilities minimise reliance upon outside services, giving us total control of final delivery schedules.



Channel tunnel locomotive superstructure, on completion of manufacture, painting and finishing

- 3 spray bake booths up to 28m long x 4.5m wide x 4.5m high
- 1 general shotblasting booth approximately 4.5m wide x 4.5m high with through doors at each end for any length up to approximately 35m
- 1 designated stainless steel bead blasting facility approximately 4m long x 2.5m wide x 2.5m high
- Ability to offer a range of finishes, up to and including locomotive body structures in metallic lacquered finish

Assembly facilities

- Numerous workshops for assembly with crange up to 40 tonnes lifting capacity with 16m maximum clearance under hook
- Separate, ‘clean’, assembly workshops



Refurbishment of mine cage

additional services

We provide consultancy, design, manufacture, installation, commissioning and service support for mine shaft systems, transportation systems and associated specialist equipment.



5.5 metre diameter double drum, double clutch winder | Ghana



Headgear
Sutton Manor, UK



Manriding car | Korea



Skip and cage shaft headgears | Harworth, UK



Head sheaves | Turkey

We also offer the full range of Hugh Smith Engineering shipyard presses, benders, rolls and edgemills.



China Press



Ships Frame Bender

The following Qualter Hall brochures
are also available, please contact
us to request a copy.

- Complete Mine Shaft and Transportation Systems
- Modular Bridges
- Hugh Smith Engineering

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