Dave Herrod, CEng, MICE, MAPM

Associate Director, Technical Expert

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Background

Dave is a Chartered Civil Engineer with over 35 years of experience in the Maritime Engineering and Ports sector. Having worked for contractors, designers, and, particularly over the last 25 years, operators, Dave has extensive knowledge of different design and construction techniques combined with the integration of construction works with port operations and dredging activities. His experience extends to associated works including pavement design, cranage, and maintenance for both container and industrial ports.

In his role as a project manager, Dave has acted as technical expert, managing major claims submitted from contractors to find a pragmatic solution. This has often involved balancing claim resolutions against the requirement of commissioning new infrastructure to become a working asset. Similarly, this process has been applied to managing defect resolution by providing expert advice to determine solutions which minimise lost production.

Dave has also acted as an independent technical expert in maritime civil engineering disputes.

Dave has experience of working with all major forms of contract including NEC, FIDIC and ICC as well as other bespoke forms. These contracts have predominantly been design and build focused but also include procurement contracts for major equipment and agreements with governments for extraction and disposal licenses.

Education and Certifications

- **Civil Engineering: BSc (Hons):** University of Bristol (1983)
- **Chartered Engineer, CEng:** Engineering Council
- **Qualified Project Manager,** APM (2016)
- **Certificate in Engineering Management,** Joint Board for Engineering Management (1998)

Professional Memberships

- **Member:** Institution of Civil Engineers (MICE)
- **Member:** Association for Project Management (MAPM)
- **Committee Member:** British Standards (BS6349)

Continuing Education

- **Accredited NEC Project Manager,** ICE (2018)

Geographies

- **Caribbean**
- **UK and Europe**

Sectors

- **Marine and Ports**

Technical Experience

Technical Expert

Technical expert services for adjudication in relation to dredging and construction works in a complex estuarine environment (UK). Representing the contractor, carried out a review and analysis of contract documentation and provided expert technical reports in support of the adjudication.

Technical expert services in relation to wave damage to floating pontoon berths (Singapore). Carried out a review of the contract documents and a review of the damage, and prepared an expert technical report.

Technical expert services in relation to a damaged sea outfall (Malaysia). Carried out a review of the contract documents, provided advice on appropriate diving procedures for the inspection and recovery of damaged components and prepared an expert technical report as to the likely cause.

Quay Walls and Structures

Design and construction of deep combi-pile quay walls, tie bars and anchors to provide berthing for 16m draught vessels in Southampton and Hull, UK.

Feasibility studies to define optimum quay wall design, including consideration of suspended quays, combi-wall and caissons in Southampton, UK.

Investigation into potential failure mechanism of complex diaphragm-walled dock and lock structure in Portbury, UK.

Design and construction of steel and concrete floating pontoons and wave breaks in the UK.

Design and construction of tied concrete retaining wall to replace failed gravity quay wall in Bermuda.

Remediation of gravity breakwater by grout injection in Ramsgate, UK.

Investigation, design and construction of scour protection resulting from vessel propulsion units in berth pockets.

Assessment and design of berth pockets to accommodate jack up barge leg loadings.

Dredging / Reclamation

Definition of capital dredging strategy to optimise access window for 16m draught vessels in Southampton, UK, using vessel transit and tide models to maintain under-keel clearance, and vessel simulation modelling to validate vessel interactions.

Design, specification, and contract drafting for 11 million cubic metre capital dredging project to deepen Southampton approach channel in the UK including assessment of risk allocation, paid over-dredge, and allocation of fixed/ variable costs. Contract management including assessment of dredger productivity, and coordinating activity of multiple TSHDs, bed levellers and backhoe dredgers in Southampton, UK.

Assessment of siltation rates using historical data, wave and current modelling to define and optimise maintenance dredging strategies in Dover, UK.

Specification and construction of land reclamation using sea-won aggregate including pump-ashore and fixed and floating pipelines.

Dynamic compaction of reclaimed material.

Harbour Revision Orders, Marine Licencing and Production Agreements in support of maintenance and capital dredging.

Dispute resolution following a collapse of underwater revetment in Hull, UK.

Feasibility study into possible dredging of Town Cut, St. Georges Harbour, Bermuda, to facilitate safe passage of cruise vessels, including vessel simulation studies.

Piling

Design and construction of sheet pile cofferdam in Canary Wharf, London.

Driven tubular steel piles including noise mitigation measures to protect adjacent residential areas.

Specification and construction of driven cast in-situ, continuous flight auger and driven pre-cast piling for varied building foundations.

Marine piling from both floating plant and jack-up barges.

UXO investigations prior to piling activities.

Fendering and Bollards

Selection, design and installation of fixed and floating fenders to optimise energy absorption whilst minimising berthing and operating constraints to vessels and port equipment.

Mooring load analyses to assess suitability of existing quay structures to accommodate larger and specialised vessels.

Investigation into bollard failures including metallurgical analysis and load testing. Development of specification for new bollards to provide enhanced quality assurance in Southampton and Hull, UK.

Review of technology and identification of strategies for bollard load testing across Associated British Ports group and Dover Harbour Board in the UK.

Port Design

Port master planning.

Container terminal planning and design.

Roll on-roll off link span and terminal design.

Development of performance specifications and construction of refrigerated cargo terminals in Southampton and Dover, UK.

Development of performance specification for specialised, innovative multi-storey vehicle storage facilities in Southampton, UK.

Planning, design, and project management of principal cruise terminal, including baggage handling and fully automated, ship-following passenger link spans in Southampton, UK.

Specialist technical lead in developing group-wide ERP system for Associated British Ports to manage all port activities over the entire group of twenty-three ports in UK.

Wave modelling and vessel simulation studies to investigate impact on vessel berthing and mooring arrangements and to validate harbour design.

Design and construction of marinas for recreational craft.

Port Cranage and Equipment

Specification, procurement and erection of ship-to-shore container cranes.

Specification and procurement of mobile harbour cranes.

Specification and procurement of cargo handling equipment including reach stackers, rubber-tyred gantry cranes, straddle carriers, and boat hoists.

Assessment of quay structures to accommodate heavy-lift activities.

Planning / Licensing and Consents

Harbour Revision Orders in support of port construction and dredging projects.

Environmental impact assessments in support of port construction.

Marine licencing in support of port construction and dredging projects.

Public inquiry and judicial review.

Pavement Design

Design and construction of heavy-duty port paving, including concrete blocks, reinforced concrete, fibre-reinforced concrete, and asphalt.

Investigation into failure of port paving in container terminals.

Project Experience

Marine

Programme Director (Port of Dover) for GBP£250 million Dover Western Docks Revival Programme involving construction of new quays, cargo terminal, marina and reclamation of operational land.

Project manager Green Port Hull (Associated British Ports) for the GBP£130 million development of a wind farm factory and load-out facility.

Engineering Project Manager Southampton Container Terminal (Associated British Ports) for the GBP£30 million re-construction of a deep-sea container berth.

Project Manager Southampton Approach Channel Dredge which is a GBP£30 million (11 million cubic metres) deepening of the approach channel to optimise access windows for 16m draught container vessels.

Design and management of berth-deepening dredging projects in Southampton, UK.

Project management and construction supervision of multiple port-related projects over 20 years.

Project Engineer for a variety of specialist underwater construction works, including the design and construction of a submerged service route at Canary Wharf, London (Shoreline Engineering).

Ports

Lead in obtaining Harbour Revision Orders, Licences and consents in support of various large-scale port development and dredging projects (Dover, Southampton, and Hull, UK). Prepared technical witness statement in support of the client's response to a Judicial Review challenge.

Feasibility study / outline master plan for Port of Dublin (Moffat and Nichol).

Design of inland container depot and marine port facilities for East Africa (Bertlin and Partners, UK).

Client's technical lead for outline scope of proposed GBP£800 million container terminal development on a brownfield site in Southampton, UK.

Member of Port Safety Organisation Committee drafting industry guidelines to the diving regulations. Development of diving protocols and permit systems for Associated British Ports.

Engineering Commercial and Contract Management

Client's appointed contract lead on a variety of engineering projects up to GBP£250 million, with individual contract values of up to GBP£130 million.

Led client-side dispute resolution on many schemes. Examples include a GBP£10m pavement claim in Dover, UK, piling claims GBP£5 million, Southampton, dredging claim and associated delays, GBP£20 million in Dover, UK.

Technical due diligence (Moffat and Nichol) for refinancing of a major UK ferry operator.

Technical due diligence (Moffat and Nichol) for refinancing of major UK port operator including assessment of port assets.

Professional Experience

- **Rimkus (Formerly Capital Consulting International, CCi)** **2023 – Present**
  - Associate Director, Technical Expert
- **Dover Harbour Board** **2017 – 2022**
  - Programme Director
- **Associated British Ports** **1996 – 2017**
  - Engineering Project manager