

Jetty Condition Survey & Structural Assessment



Location:
Groveport, Scunthorpe,
North Lincolnshire



Client:
PD Ports



Value:
£20k



Civil Engineering

Structural
Engineering

Building Consultancy

Geotechnical and
Geoenvironmental
Engineering

Project Management

Specialist services

Structural assessment of suitability of existing quay to receive new cargo handling operating equipment and development of operational methods.

Engineering and Design Factors

The work required a detailed determination of the capacity of the existing jetty to receive increased imposed loads from new operational plant. The work required a detailed understanding of operational working methods in order to establish realistic loading scenarios to deliver efficient working practices and establish suitable management controls.

Description of the Works

The analysis of the jetty required detailed site investigation to establish the precise construction of the jetty across three different construction forms. This included:

- Specialist NDT testing to establish pile length using insitu ultrasonic sounding
- A borehole to confirm soil horizons and parameters to determine pile capacity
- Radar scanning of deck reinforcement to confirm arrangement and spacings
- Intrusive breakout and reinstatement to confirm reinforcement section size and type.

Following establishment of the various construction forms along the length of the jetty, specific load cases for the proposed plant were established based on operational and cargo handling requirements. Modern plant typically generates significantly higher loads than original equipment and this requires considerable care to be taken to find acceptable working solutions for older structures. A successful solution was ultimately found including specifying detailed operating procedures.

Core services

Structural Engineering / Maritime Engineering