

SEAL SANDS

RIVER TEES, SEAL SANDS

JETTY INSPECTIONS

The Frankham Consultancy Group were commissioned by Navigator Terminals to complete structural inspections of three jetties and their associated revetment wall at Seal Sands on the River Tees.

Following the inspections, our maritime team prepared condition reports with recommended remedial repairs presented in a low/medium/high risk schedule and were accompanied by defect location sketches.

In advance of the inspection works, the following activities were completed to aid the effectiveness of the time spent on-site:

- A desktop site reconnaissance visits via satellite imagery
- Preparation of base drawings of the marine assets (based on as-built drawings provided by the client).
- Review of existing data, as built and previous inspection records.

COVID-19 presented us with a significant challenge. Typically, a two-person inspection team plus a boatman and deckhand would be used to complete a jetty inspection. To maintain social distancing practices between the inspector and access vessel operatives, a lone inspection engineer worked with the boatman.

A tactile inspection was carried out where possible and visual inspections were carried out in areas where tactile access could not be gained. Access was gained by foot and via a small rigid hulled workboat provided by S & S Safety Boats.

The timings of inspections were targeted to maximise the amount of time spent at periods of low and high tides where required. This provided the best opportunity for the inspection engineer to identify accelerated low water corrosion (ALWC). The scope of the inspection included the structural elements detailed in Table 1.

Jetty Structural Elements	Access via	Time of Inspection
Deck	Foot	Any
Deck Soffits	Workboat	High tides
Piles	Workboat	High & low tides
Walkways	Foot/workboat	High tides
Fender Panels & Sub-structure	Workboat	High & low tides
Access Ladder	Workboat	High & low tides
Mooring Equipment	Foot	Any

Table 1: Showing structural elements inspected

Our Frankham engineers were able to obtain ultrasonic thickness measurements (UTM) of steel piles at or close to the low tide levels with the use of our Tritex Multigaugage 5600.

Frankham worked with Navigator to supplement their existing Jetty maintenance programme ensuring a cost effective maintenance regime. We tailored our reports specifically to support a 5-year (and beyond) maintenance plan where budgets could be spread over a number of years to ease the financial burden on the client.

Our engineers assess for accelerated low water corrosion (ALWC) and microbially influenced corrosion (MIC). ALWC is a lesser-known phenomenon which can cause catastrophic damage if left unchecked. We take opportunities to raise awareness of this defect where we can.



FRANKHAM

Client:
Navigator Terminals

Sectors:
Transport - Port/Marina
Industrial - Maritime

Services:
Civil Engineering



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This is the second project where I have engaged Frankham to provide Navigator with an independent condition report on terminal assets to form the basis of existing and future capital projects. Frankham take onboard what you want, provide you with viable options and deliver exactly what you need when you need it.

Garry Lee
Senior Project Engineer
Navigator Terminals

