

PELANGI

Application Note 31117

Humber Sea Terminal

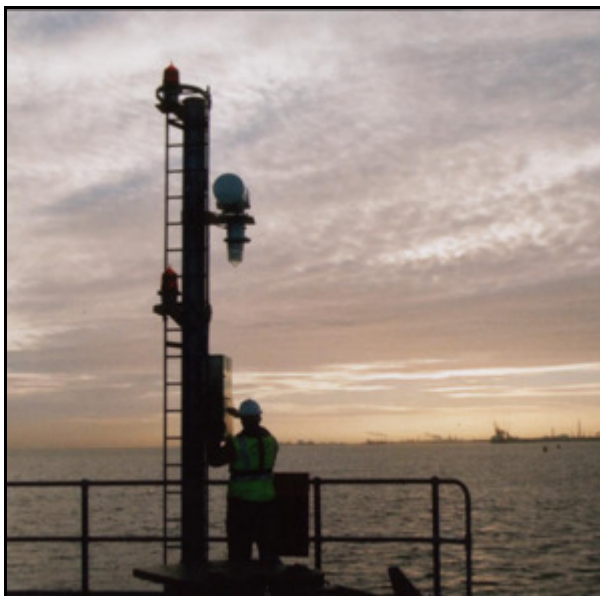
Client: Simon Ports Ltd operates a large distribution centre on the river Humber, located within 200 miles of every major UK city. It's phased growth now includes 6 berths with further berths planned.

Project Aim:

As with other sites on the River Humber, Pelangi International was chosen to provide the Aids to Navigation, including design, supply, installation services, and ongoing support. As the Humber Sea Terminal operates 24 per day, it was important to provide reliable Aids to Navigation which would allow ships to berth safely at night and in adverse fog with restricted visibility.

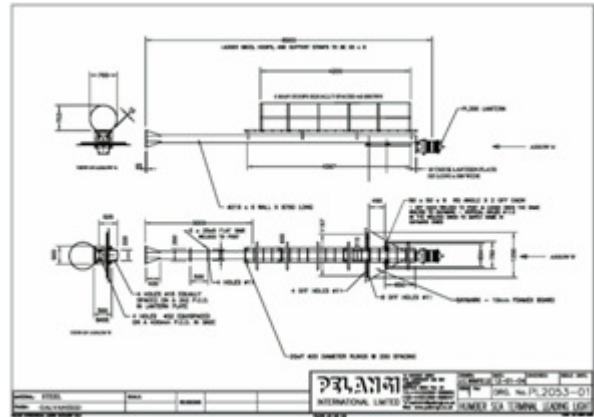
Technical Solution:

Phase 1 and 2 included a mains powered Bi-form lantern pair with battery back up located on the Easterly mooring dolphin. A high definition sector light was also mounted on the same column switched remotely from the Berthing masters office on demand to assist approaches. In addition a Xenon strobe light switched via the same system identified the jetty end in Fog.



5m column with Bi-form PL155 Lanterns, Sector Light, and PL155 Strobe for low visibility

Phase 3 provided the same bi-form lanterns but this time powered via solar.



Phase 4 provided a similar Xenon strobe at the opposite end of the berth but activated via radio due to cabling restrictions to the same berthing masters office.

Phases 5 and 6 included the supply and erection of a traditional leading system mark the westerly edge of the dredged basin light by GPS synchronised PL100 LED range lights powered by solar.



Assembly of day marks on to the 8 metre front tower showing Berths 3 and 4 behind.

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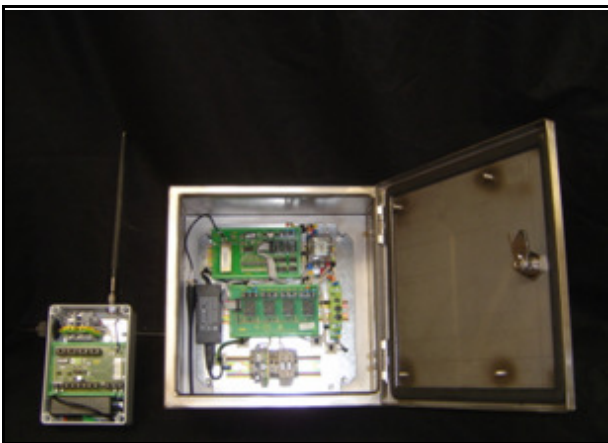
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Having installed the front marker the rear 14 metre steel lattice tower was erected by Pelangi engineers with the same **PL100** blue LED range lantern and solar but this time with an inverted daymark.



With front and rear erected both lights were aligned on bearing, levelled and checked for synchronisation via **GPS**.



Radio Control System for the Fog Strobe, to facilitate remote activation

To complete the system a second traditional set of transits was set up on the inside of the berths 5 and 6 this time equipped with a short range sectored PL300 lantern this time powered from the mains.

Overall the aim of the scheme was to provide the masters with visual assistance of their position both day and night when swinging the vessels in high Humber currents on bow thrusters. By mixing traditional methods with modern power sources and GPS synchronisation, interconnecting cable work was kept to an absolute minimum thus reducing costs.

Working closely with the Berthing and Ferry masters it was possible to tailor subsequent phased design based on each experience gained which was acceptable to both the client, ABP Hull and Trinity House.