

DOOLEY TERMINAL – UPGRADING RORO 3 & 4

PROJECT BRIEF

1. Introduction

The Dooley Terminal facility at the Port of Felixstowe currently operates two linkspan facilities; RoRo 3 and RoRo 4. Both RoRo 3 and RoRo 4 were constructed in the early 1970s to a similar arrangement and take the form of steel bridge structures (box trusses) with concrete decking, hinged at the bankseat. The gradient of each linkspan is manually controlled using hydraulic rams supported from an overhead portal structure towards the seaward end of the bridge. The operational dredge depths of RoRo 3 and RoRo 4 are – 7.30mCD and –9.75mCD respectively.

To facilitate the operation of larger vessels and to improve vessel turn-around times, the existing RoRo 4 structure is to be replaced with a completely new linkspan that will accommodate a vessel beam of up to 27m (to be confirmed) together with a wider (3-lane) bridge. The existing RoRo 3 linkspan is to remain and will generally be used as a back-up facility for RoRo 4. However, in order to accommodate longer vessels, up to 210m overall, the effective length of RoRo Berth 3 is to be extended by the introduction of mooring dolphins. The general layout of the proposed new facilities is shown on the attached plan 26/6890.

2. General Requirements

RoRo 4

It is anticipated that an integral tank floating linkspan will be the most suitable solution to accommodate the existing berth geometry. Consideration will however be given to other possible linkspan arrangements.

In general terms, the extent of the work to upgrade RoRo 4 is envisaged to include the following:

- Demolition/removal of the existing linkspan bridge and support frame.
- Demolition of the port-side (west) support structure as necessary (tubular piles and reinforced concrete deck) and make good the remaining section.
- Breakout (where necessary) the existing bankseat.
- Construct a new bankseat and install linkspan guide pile.
- Upgrade/install services to suit new linkspan, including the refurbishment of the Services building.
- Replacement fenders, associated supports and realigned cope to RoRo 4.
- Fabricate, install and commission new linkspan.

The operational dredge depth to RoRo 4 is to remain unchanged at –9.75mCD.

RoRo 3 Berth

To accommodate longer vessels, the berthing length of RoRo 3 is to be extended by the construction of a number of individual mooring dolphins connected by a series of pedestrian footbridges linked back to the existing dolphin alongside RoRo 4.

No work on the actual RoRo 3 linkspan is envisaged.

Remedial Works

It is anticipated that remedial works will be required to the existing quayside facilities including:

- Repairs to reinforced concrete soffits to RoRo 3 & 4 linkspan support structures and existing dolphin.
- Repairs to reinforced concrete soffits to RoRo 3 & 4 cope beams along the berthing lines.
- Repairs to tubular piles which support the existing RoRo structures

3. Construction Phasing

The construction of the Works is to be phased so that ongoing RoRo operations are maintained at all times. RoRo 4 is currently the primary facility, with RoRo 3 used as a back-up facility. To enable the replacement of the bridge on RoRo 4, the works to extend the berth to RoRo 3 (dolphins and footbridges) shall be constructed first, so that ongoing RoRo operations are switched to RoRo 3 prior to RoRo 4 being released to the contractor for demolition and upgrade.

4. Design and Construction

The integral tank floating linkspan to RoRo 4 will be procured using a performance specification (Employer's Requirements) and the linkspan and bankseat will be designed by the Contractor (or specialist sub-contractor) based on the information provided in the Employer's Requirements. Although the floating linkspan and bankseat will be Contractor-designed, the dolphins and footbridges to extend RoRo 3, together with the general arrangement and layout of RoRo 4, including modifications to the port-side support structure, services, pavement, and the like shall be traditional Engineer's design. The replacement fenders, associated supports and realigned concrete cope to RoRo Berth 4 shall also be Engineer's design, as will the remedial works to the soffits and piles.

The construction contract will be procured through a one-stage competitive tender, with Definition Drawings and Employer's Requirements for the Contractor-designed elements and Specification and drawings for the Engineer-designed elements.

5. Programme

The outline programme for delivery is indicated below:

- Issue tender documents Dec 2018 / Jan 2019
- Appoint contractor May 2019
- Project completion March 2020