ABPmer
Quayside Suite, Medina Chambers
Town Quay, Southampton SO14 2AQ
www.abpmer.co.uk

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Troon East Pier Proposed Marine Works 2020

Introduction

Works are required to the existing berth at the Outer East Pier at Troon to safely accommodate ferry services at the Port of Troon.

Marine Works

The proposed marine works include two intermediate berthing dolphins, installed along the same berthing line as the existing dolphins, parallel to the East Pier. These fall within the Limits of Deviation of the Associated British Ports (Troon) Harbour Revision Order 2000.

The dolphins will comprise of reinforced concrete structures with parallel motion fender unit facings. A 870 m^2 reinforced concrete deck will also be installed to the same level as the East Pier.

More specifically this will include:

- The two intermediate berthing dolphins are to the same specification as the existing berthing dolphins 1-3 along the same berthing line parallel to the East Pier. Each dolphin will incorporate one 50 tonne capacity bollard. The dolphins will comprise of reinforced concrete structures and will have its own fendering system which will in combination with the dolphin structure be designed to accommodate the berthing energy of the vessels detailed in the original design. The parallel motion fender units fitted to dolphins 1-3 are twin SCN900 manufactured by Trelleborg.

- The installation of a suspended concrete deck which spans between the existing fender line and the existing East pier. It is envisaged that this concrete deck will be located continuously between the new intermediate dolphins 1.5-2.5 to the same level as the East Pier.

- The structure and capability of the suspended deck will be similar in nature to the Wee Hurry Quay which is located inside the Port of Troon.

It is expected that where possible the works will be constructed by plant using the East Pier as a platform. However, the use of floating plant will also be required. It is anticipated that the works will take approximately 26 weeks to complete. Piling will be undertaken from a Jack-up barge and is anticipated to take 7-8 weeks.

Marine Mammals

Within the Firth of Clyde the most numerous species of marine cetacean is harbour porpoise *Phocoena phocoena* (Goodwin & Speedie, 2008). As well as harbour porpoise, both common dolphin *Delphinus delphis* and bottlenose dolphin *Tursiops truncates* are occasionally seen but in lower numbers than harbour porpoise (Sweeney & Learmouth, 2020). None of these species regularly occur within the vicinity of the Port of Troon. Both of the UKs two resident species of seal (harbour (common) and grey) occur regularly within the Firth of Clyde and are sighted within the inner harbour at the Port of Troon (DECC, 2016; (Sweeney & Learmouth, 2020).

Measures will be put in place during the works to avoid disturbance or injury to marine mammals. This will include the use of soft start (the gradual increase of piling power, incrementally, until full operational power is achieved) as part of piling operations. This will give marine mammals (and fish) the opportunity to move away from the direct vicinity of the marine works before the onset of full impact strikes. The duration of the soft start is proposed to be 20 minutes in line with the Joint Nature Conservation Committee (JNCC) "Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals during piling" (JNCC, 2010).

Prior to the commencement of percussive piling a pre-piling search will be undertaken by a qualified Marine mammal Observer (MMO) for a minimum of 30 minutes to determine that no marine mammals are within 500 m of the piling activity (the mitigation zone). Piling will not be commenced if marine mammals are detected within the mitigation zone or until 20 minutes after the last visual detection.

During percussive piling a member of the construction team will observe the mitigation zone to determine that no marine mammals are within 500 m of the piling activity. Construction workers will be alerted if marine mammals are identified and percussive piling will cease whilst any marine mammals are within the mitigation zone. Piling will recommence when the marine mammals exits the mitigation zone and there is no further detection for 20 minutes.

If there is a pause in the marine piling operations for any reason for a period of greater than 10 minutes, then the pre-piling search and soft-start procedure will be repeated before piling recommences. If, however, no marine mammals have entered the mitigation zone during this period piling will recommence immediately.

References

DECC (Department of Energy and Climate Change) (2016). UK Offshore Energy Strategic Environmental Assessment 3: Future Leasing for Offshore Wind Farms and Licensing for Offshore Oil & Gas and Gas Storage.

Goodwin, L. and Speedie, C., 2008. Relative abundance, density and distribution of the harbour porpoise (Phocoena phocoena) along the west coast of the UK. Journal of the Marine Biological Association of the United Kingdom, 88(6), pp.1221-1228.

JNCC, 2010. Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise [online] Available at: http://data.jncc.gov.uk/data/31662b6a-19ed-4918-9fab-8fbcff752046/JNCC-CNCB-Piling-protocol-August2010-Web.pdf

Sweeney, A. and Learmouth, J. 2020. Millport Coastal Flood Protection Scheme: Environmental Statement. Chapter 10: Marine Mammals and Basking Shark