

**SECTION III OF CARLINGFORD LOUGH GREENWAY FROM THE NI / ROI
BORDER TO VICTORIA LOCK AMENITY SITE**

MAY 2023

Background:

Doran Consulting are appointed by Louth County Council as Project Manager and Civil Engineer for the development of 'Carlingford Lough Greenway', a proposed Cross Border Greenway running along the Old Dundalk, Newry and Greenore rail line and part of a major Greenway link from Belfast to Dublin referred to as the "Great Eastern Greenway". The 'Carlingford Lough Greenway', as the name suggests, generally runs along the coast of Carlingford Lough.

'Carlingford Lough Greenway' is divided into 3 sections, with a total length of 7 kilometres. This Marine Construction License refers to Section 3, from the NI / RoI Border to Victoria Lock Amenity Site. The site is a linear corridor between 5-15 m wide and approximately 1,715km in length, of which:

Section	Chainage	Length	Form of construction	Works below MWHS
3.1	0 to 75m	75m	2.5-3m wide bound (asphalt) greenway	No
3.2	75m to 510m	435m	4m wide timber boardwalk	Yes
3.3	510m to 885m	375m	3m wide unbound (gravel) greenway, across Rough Island.	No
3.4	885m to 1475m	590m	4m wide timber boardwalk	Yes
3.5	1475m to 1715m	240m	3m wide bound (asphalt) greenway	No

This Marine Construction License submission is for the interconnecting boardwalk, as the substructure works are within the MHWS mark.

Chainage	Length	Form of construction
75m to 510m	435m	4m wide timber boardwalk
885m to 1475m	590m	4m wide timber boardwalk

DESCRIPTION OF THE WORKS

The greenway sections 3.1, 3.3 and 3.5 are ground bearing, and 5m to 10m inland from the MHWS mark, hence excluded from this MCL application.

The greenway sections 3.2 and 3.4 comprise a piled boardwalk and a typical cross section is shown on Figure 1. Refer to the drawings 181146-DC-S3-XX-MCL-C-001 to 007 for further sections. It consists of a 4m wide timber boardwalk with steel sub-structure and founded on piles, 1.5m high timber railings.

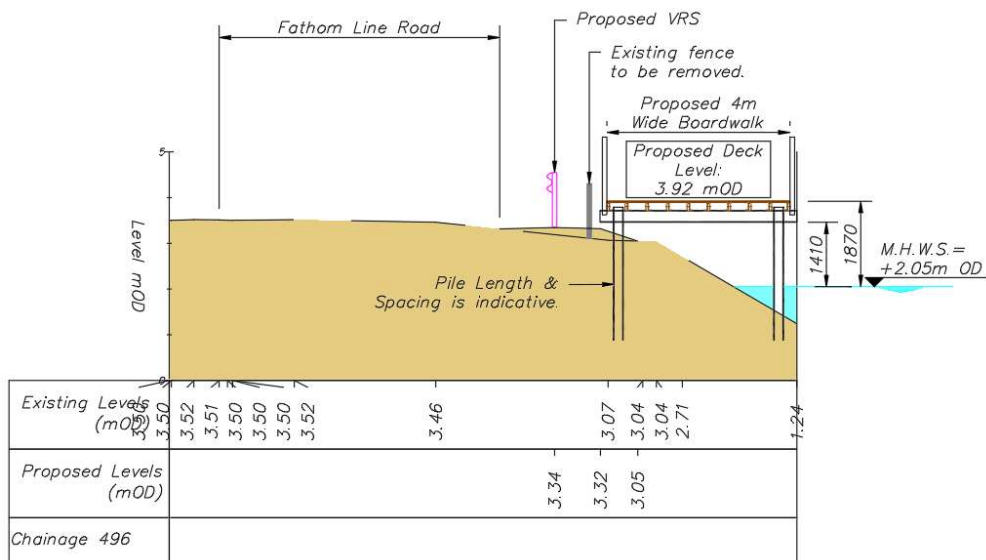


Figure 1 – Typical boardwalk section

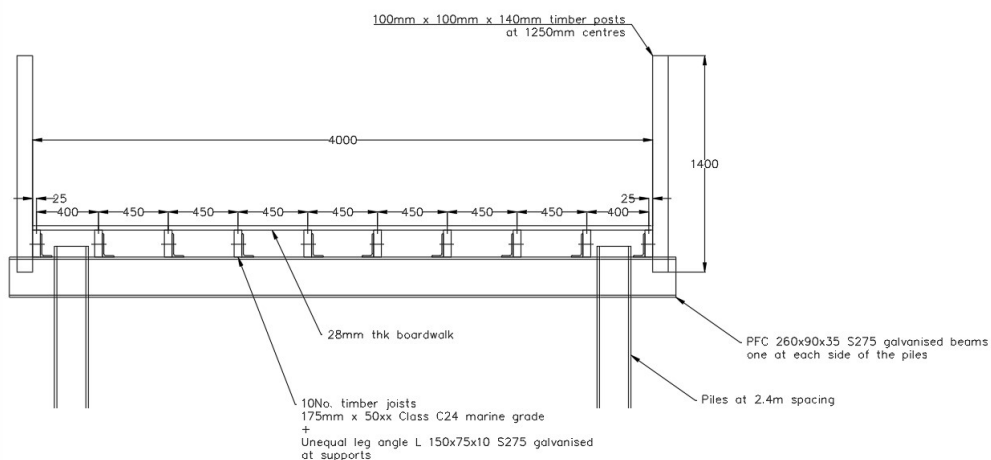


Figure 2 – Typical boardwalk structure

PRELIMINARY CONSTRUCTION METHODOLOGY

The proposed works will be put out to competitive tender and upon appointment of a successful Contractor a full detailed methodology will be available. The following statement provides a summary of the proposed works, based on the information available at the time of submission.

1. Setting Out and Site Clearance:

Vegetation and scrub clearance where required.

It is anticipated that a small section of rock armour revetment at the seaward pile location will be removed and temporarily relocated on-site for reinstatement following driving of the piles. Removal of existing rock armour will be performed by an excavator and set on a loader/dumper and transported to the nearby temporary stockpile area.



Figure 3 – Existing rock armour section

2. Temporary working platform, if required by the Contractor

Construction of a temporary working platform seaward of the boardwalk. Platform to be enveloped in geotextiles, with a geogrid separator layer placed directly onto the foreshore and timber mats placed above, which would be recoverable at a later date following the completion of the works.

There is the potential that a layer of sacrificial material may be required to aid the recovery of the geogrid separator layer. The use of the sacrificial materials could comprise biodegradable materials such as straw or reeds. Where these are unsuitable, locally sourced sand could be used sparingly through agreement with DAERA.



Figure 4 – Mudflats – temporary working platform to be placed on top of mudflats with geogrid separator layer

3. Piling Method Statement

It is anticipated that the piles will be installed using a pile driver mounted to a large excavator. CHS steel piles to be driven to design depth using vibration techniques and, if design depth is not achieved, an impact hammer may instead be used to drive the piles to the design toe level. Soft-start procedures will be used to ensure incremental increase in pile power over a set time period until full operational power is achieved to minimise environmental effects.

The pile driver mounted to a large excavator location will be determined by the contractor – we anticipate the below options:

- a. Temporary road closure and both piles to be driven from the road;
- b. Landward piles to be driven from the road and seaward piler to be driven on rigs mounted on a floating plant;
- c. Plant working from the temporary working platform.



Figure 5 – Example of piled boardwalk

4. Rock Armour Reinstatement

Rock armour units will be retrieved from the temporary stockpile area via excavator and delivered to a designated unloading. A long-reach excavator will be positioned at the adjacent road or temporary working platform and will lift the rock armour units into position on the seabed using a grab, ensuring they are not dropped from height to prevent damaging the armour and dislodging sediment. Any rock armour to be placed above the waterline will be monitored closely until the desired profile is achieved.

5. Steel substructure and boardwalk superstructure to be constructed.



Figure 6 – Example of piled boardwalk