

# Strangford Lough Yacht Club

Method Statement

June 2025



## Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
00	16/06/2025	■	■	■	Issue to Client
01	23/06/2025	■	■	■	DAERA Marine License Issue

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## 1. Introduction

Project Information			
Client Name	Strangford Lough Yacht Club	Date of Work Commencing	September 2025
Client Reference	-	Date of Work Completion	N/A
Scheme Name	SLYC	Scheme No	160-SLYC-01

Summary of Works
<p>Amphora Consulting have been engaged by Strangford Lough Yacht Club (SLYC) to act as Principle Designer for the below discussed pile repair and pontoon upgrade. The project involves structural repairs to two pontoon piles, including installation of new steel jackets, realignment, and corrosion protection, along with removal of the existing pontoon and replacement with a newly fabricated pontoon securely fixed to the repaired piles. Additional protection against future corrosion will be provided by fitting new sacrificial anodes to each pile.</p>

## 2. Method of Construction

The proposed works focus on restoring the long-term stability and integrity of the pontoon piles. While installing entirely new piles would be optimal, practical considerations such as cost and time have led to a focus on effective repairs to the existing pile system.

An outline methodology/programme is presented as follows:

1. **Mobilisation:** Mobilise a barge equipped a Hiab crane to site. The barge will remain onsite for the full duration of works. Set up all diving equipment, plant and tools required to complete the pile remediation and pontoon replacement.
2. **Secure Working Platform:** Deploy the barge and establish a stable working platform. Using the barge's Hiab crane, secure the existing pontoon in place with straps or chains to control movement before detachment operations begin.
3. **Detach and Float Pontoon:** Carefully detach the existing pontoon from the piles using divers and crane support. Once detached, float the pontoon to a designated near-shore location for safe removal.
4. **Pontoon Removal and Inspection:** Lift the detached pontoon from the water using the crane and place it in a secure area for inspection. Inspect the removed pontoon for the presence of any invasive species and then decommission it in accordance with standard construction waste management procedures, ensuring compliance with relevant biosecurity measures.
5. **Environmental Protection:** Before any underwater pile works begin, install silt curtains around the work area to control and contain disturbed sediment and protect the surrounding marine environment.
6. **Pile Excavation:** Divers will excavate the concrete at the base of both piles to a depth of 500 mm below current levels using airlift and pressure jet washers.
7. **Bracket Removal:** Divers will remove existing legs of the "L" brackets, retaining the existing collars in place.
8. **Internal Cleaning:** Through the gap in the existing collar, divers will power wash the internal concrete fill to remove all loose and friable concrete, readying the piles for grouting.

9. **Pile Surface Preparation:** Pressure wash the external pile surfaces to remove all loose material prior to installation of the new steel jackets.
10. **Debris Removal:** Divers will conduct a clearance dive to remove any large objects or loosened debris generated during preparation works. Items will be hand-bagged underwater and recovered to the surface for disposal as construction waste.
11. **Pile Alignment:** Use the barge crane to straighten the piles to correct any lean before fitting the new jackets.
12. **Steel Jacket Installation:** Using the Hiab crane, lower the new steel jackets into place. Divers will fit each jacket around the pile and existing collar, extending down into the excavated area and resting on the exposed seabed. Shims will be positioned as needed to maintain a consistent 50 mm gap all around the pile for grouting.
13. **Grouting:** High Strength Flowable Marine Cementitious Grout (Sika Parex 100 Newtown Grout AW GB or similar approved) will be mixed on the barge deck in a bunded area. A tremie pipe will be lowered into place and grout poured under diver supervision to fill the annular space between the steel jacket and pile, including any internal voids. The steel jacket encasing will ensure no overspill of grout to the wider shoreline environment occurs. Marine grade grout to be used as specified above to ensure clumping occurs underwater and that fine sediments are not created.
14. **Anode Installation:** Divers will weld two 45 kg zinc sacrificial anodes with continuity bars onto each pile for long-term cathodic protection.
15. **Demobilise Dive Team:** Dive team to demobilise from site and remove silt curtains only after all sediments have settled out. A final dive to retrieve debris will be carried out and all items bagged and brought to the surface. For reference, no waste will be created other than that of the friable concrete from the existing pile base.
16. **New Pontoon Installation:** Place new pontoon into water with shore mounted crane. Float the newly fabricated pontoon into position and secure to repaired piles.
17. **Completion and Demobilisation:** Full demobilisation from site, including welfare facilities.

### **3. Equipment & Plant**

#### **Marine Construction Equipment**

- Workboat with crane (Marine construction barge with Hiab crane)
- Airlift excavation equipment
- Diver support systems

#### **Pile Repair and Installation Tools**

- Custom steel jackets and brackets
- Grouting equipment and tremie system
- Welding tools

#### **Pontoon Replacement**

- Lifting and rigging equipment for pontoon removal and installation
- Newly fabricated pontoon (delivered to site by approved transport)

#### **Corrosion Protection**

- Sacrificial anodes and continuity bars
- Inspection and testing equipment

#### **General Construction Plant**

- Silt curtains for sediment control
- Safety barriers and site markers
- Welfare facilities and site compound
- Waste management containers for decommissioned pontoon materials