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# **NORTH YELL DEVELOPMENT COUNCIL**

## **NEW MARINA DEVELOPMENT**

### **PRELIMINARY RISK ASSESSMENT & METHOD STATEMENT (RAMS) – PROTECTION OF SURROUNDING INFRASTRUCTURE AND MARINE ENVIRONMENT**

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JANUARY 2019

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### Appendix A –Layout Drawings

## 1.0 Introduction

The following RAMS looks at the proposed construction activities of providing a new marina, with general fill provided from the creation of an extended industrial site, and armour protection imported from Gutcher Quarry as required.

The layout (Drawings 162093/M-53&57 attached in Appendix A) shows location of proposed marina site together with surrounding infrastructure that requires to be protected during the works and when the facility comes into use.

The main areas of risk are the existing foreshore marine environment together with protection of existing Nova Innovation marine cables (**approx. 25m** from proposed toe of breakwater) and the proposed SSE North cables from Yell to Unst (Work License 2018/014/WL) which will be laid **approx. 215m** from proposed marine south arm.

## 2.0 Information Available

A hydrographic survey of the seabed has been obtained from existing Shetland Islands Council and NYDC records for the proposed site with all levels indicated as being relative to Chart Datum for marina site and Ordinance Datum (Local) for the industrial site.

It is proposed that the berth depth at the new marina should be a minimum of minus 0.5m to minus 2.5m Chart Datum to allow for present and future requirements.

Based on Admiralty Charts and Tide Tables, the sea levels assumed in the feasibility report have been taken from Baltasound as follows-

Mean High Water Springs                      +2.6m Chart Datum

Mean Low Water Springs                      +0.5m Chart Datum

0.0m Chart Datum is 1.37m below Ordinance Datum

## 3.0 Site Conditions and Services

The site proposed for the 26No. berth marina development is just south of the existing Cullivoe Breakwater, with the industrial site being extended west from the existing site at Cullivoe Pier.

## 4.0 Scheme Proposal

Drawings showing proposed layout of the industrial site and marina development are enclosed in Appendix A.

### Marina

The marina basin layout allows for 33No. varying depth berths (-0.5 to -2.5m CD) with the breakwater arm orientated as far as possible to provide protection to vessels using marina.

Inert stone material free from clay and organic material for the marina core will be excavated and transported from nearby industrial site extension on shore.

While it is hoped that all general fill will be sourced from the industrial site, along with some secondary armour, primary rock armour will be sourced and imported from the nearby Gutcher Quarry by road to the site.

## **5.0 Risk Assessment & Method Statement**

1.0 An updated otter survey to current study will be undertaken along immediate foreshore not more than 2 weeks before marine works commence on site. Any actions required from this study will be agreed and implemented before any works commence.

2.0 The total extent of the proposed marine works will be set out from fixed shore based control stations linked to Ordnance Survey coordinated grid system. Moored marker buoys will be placed on perimeter line of marine works to clearly mark the total extent of works. The location of the Nova Innovation marine cables will also be marked with buoys and the critical 25m offset physically checked. If alterations are required to proposed marine works setting out to maintain the 25m buffer then it will be corrected and agreed at this stage. A diver survey will also be used to check seabed accuracy as required. With the proposed SSE North cables being some 215m away from works and with a maximum 50m on shore deviation line working corridor then there is no risk of disturbance if above setting out procedure is followed.

3.0 Only inert stone fill free of all fine clay and organic material from adjacent industrial site excavation will be used for forming proposed marina access and breakwater core bund construction.

4.0 Ahead of filling works commencing from foreshore then a silt boom will be moored out from shore ahead of advancing fill operation.

5.0 As core filling commences and advances inside moored marker buoys then completed core bund exposed slope profiles will have geotextile membrane placed and secured to slopes between MHWS and seabed toe to reduce migration of sediment as far as possible.





6.0 The advancing head of the breakwater will be protected by the silt boom moored and advanced in front as core bund works progress.

7.0 Once a slope work front is finished and position and profile accurately checked against contract setting out coordinates then inert secondary and primary stone armour will carefully place over the protective geotextile slope membrane to permanently secure in place.

8.0 During construction works then a banksman will be observing any marine, sediment and material movement including further mitigation as required due to changing weather, wave and tidal action.

Only experienced marine contractors will be invited to tender for the works and they will be asked to submit a Contract Environmental Management Plan (CEMP) and RAMS for approval by statutory authorities and construction contract as required and before any works commence on site. The CEMP will include construction restrictions during breeding season and methods for preventing and dealing with fuel and construction plant and material spillage during the works.

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## **Appendix A**

### **Layout Drawings**

**162093/M-53&57**