Notice to Mariners

Pentland Floating Offshore Wind SEAWATCH LiDAR Buoy

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00	22 July 21	For Review	First Issue	CAB	RJG	LXF
01	03 August 21	For Review	Updated buoy positions	RJG		

Project Team

Initials	Name	Role
CAB	Chloe Bodemeaid	Senior Oceanographer
RJG	Becky Griffiths	Oceanographer
LXF	Lars Fogelin	Project Manager

Contents

Tables in the Main Text

Figures in the Main Text

1. Introduction

Mariners are advised that Fugro are planning the deployment of a SeaWatch LiDAR Buoy (SWLB); this is a sea state measurement instrument (referred to as 'the equipment'). The deployment location is within the UK Sector of the North Sea off the north coast of Scotland, as shown in the coordinates below.

The equipment will be deployed for approximately one year with planned deployment at the earliest possibility on or after 30 July 2021.

The equipment will be located as close as reasonably practicable to the coordinates as provided within this Notice to Mariners.

The equipment is to be deployed by a single vessel. Deployment will take one day on site. Scheduled maintenance is planned every six months, but unforeseen maintenance may be required.

The equipment will be moored through a combination of steel chains, rope and rubber cord to approximately 2250 kg anchor weight at the seabed.

2. Area of Operations

The equipment is to be located within 250 m of the licenced position, provided in Table 1 and Figure 1.

Table 1: SWLB deployment coordinates

Name	Latitude [WGS84]	Longitude [WGS84]	Depth [m]
Pentland Firth SWLB	58° 39.1675' N	003° 52.2809' W	86

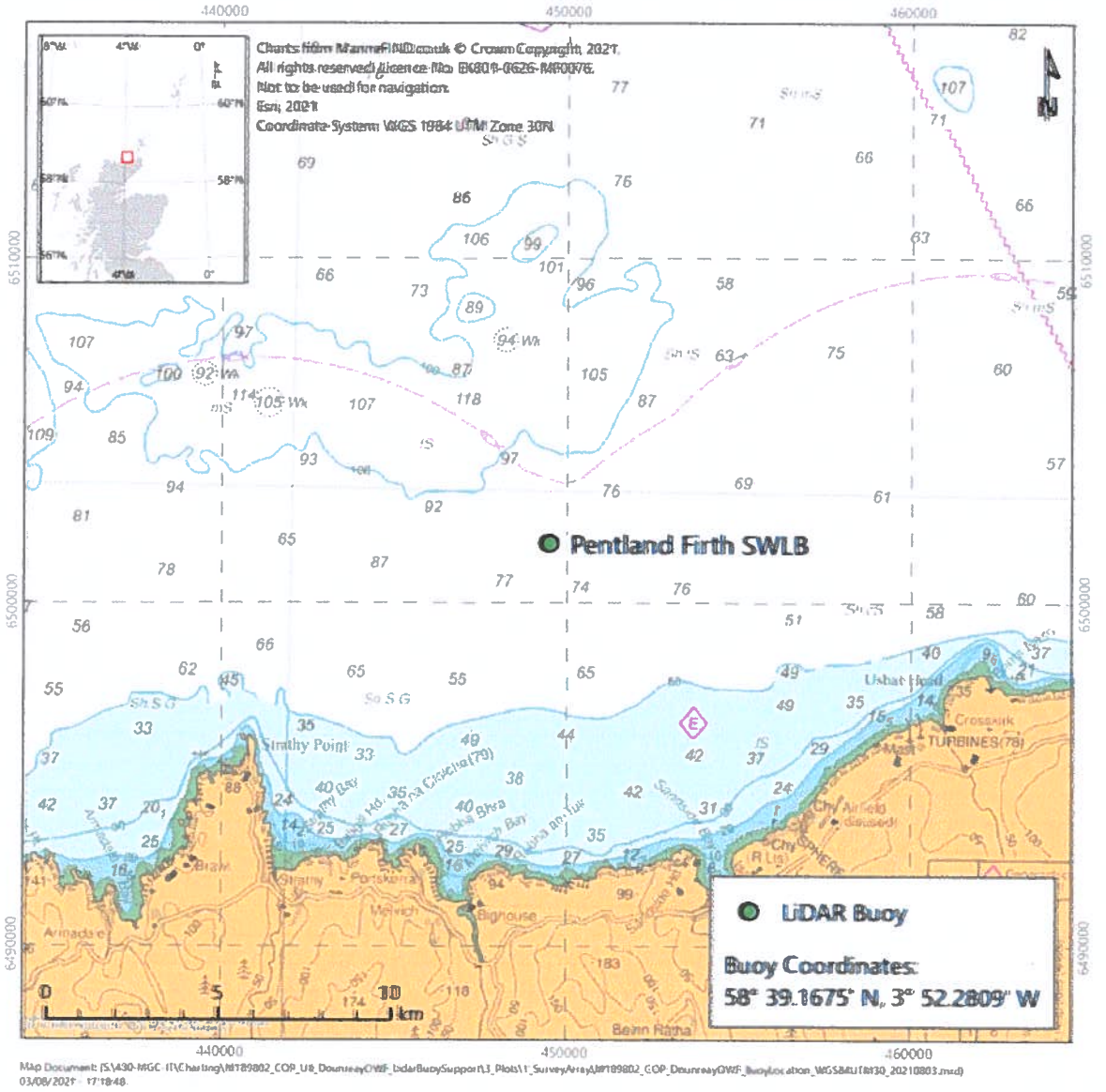

Figure 1: SWLB deployment location

3. Offshore Metocean Measurements

3.1 The Equipment

The equipment is an integrated Seawatch Wavescan buoy and ZX 300M LiDAR; the purpose of the equipment is to collect oceanographic and meteorological data using a single platform. The equipment is supplied and charged by an onboard power system which uses methanol fuel cells and solar panels to recharge onboard lead acid batteries.

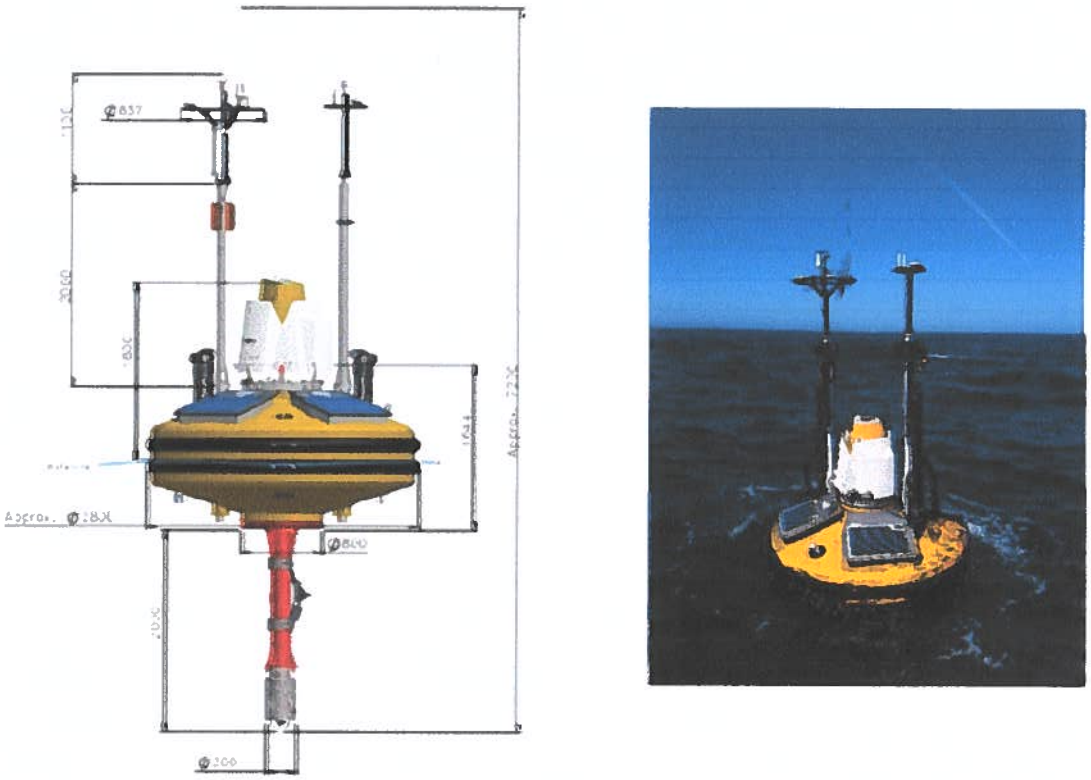

Figure 2: Equipment dimensions (left), example deployment (right)

In order to minimise the risk to other sea users, the measures listed below have been adopted for this deployment:

The equipment is equipped with a F1 (5) Y 20 s light with 4-5 nautical mile range; the light is mounted at the top of one of the masts, approximately 4 m above sea level. The flash sequence for this light is detailed in Table 2.

Table 2: SWLB light flash sequence

Flash Code	On [s]	Off [s]	On [s]	Off [s]	On [s]	Off [s]	On [s]	Off [s]	On [s]	Off [s]
FL (5) 20 S	0.8	1.2	0.8	1.2	0.8	1.2	0.8	1.2	0.8	11.2

Additional risk reduction measures include the use of passive radar reflectors to make the buoy more visible on vessel radars, Automatic Information Systems (AIS) to broadcast the buoy position to marine AIS platforms, Global Positioning Systems (GPS) position monitoring of the buoy at 30-minute intervals and an independent GPS tracker used for backup position monitoring of the equipment in the event of primary GPS failure.

The equipment is moored using a single point mooring. The mooring design allows for free movement of the buoy over a radius that is approximately equal to the water depth. The anchor weight used to moor the equipment is approximately 2000 kg weight in water and comprised of large diameter scrap chain.

It should be noted that some elements of the mooring float just below the sea surface. To avoid the risk of entanglement, vessels should allow a minimum 200 m clearance from the surface buoy.

4. Immediate Contacts

Enquiries regarding the contents of this Notice to Mariners or any other matters should be directed to the persons outlined in Table 3.

Table 3: Contact persons

Role	Name	Contact Details
Fugro Project Manager	Lars Fogelin	+47 924 10 056 Lfogelin@fugro.com
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